Kodak RVG 6500

System

Kodak RVG 6500

IPS System

User & Installation Guide

Notice

The User & Installation Guide for the KODAK RVG 6500 System includes information on the installation of the device as well as its usage. We recommend that you thoroughly familiarize yourself with this Guide in order to make the most effective use of your system.

The KODAK RVG 6500 (with or without IPS) System, wireless digital intra-oral X-ray system, is intended to produce an image of the dental area at the direction of health care professionals of dento-maxillo-facial region of the human anatomy.

The KODAK RVG 6500 IPS System, in addition, provides the Intelligent Positioning System (IPS) to enable the dentist prior to acquisition to correctly align the X-ray beam to the RVG sensor.

WARNING: We recommend that you consult the "Safety, Regulatory and the Technical Specification User Guide" before using the KODAK RVG 6500 Systems.

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U.S. Federal law restricts this device to sale by or on the order of a dentist or physician.

This document is originally written in English.

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KODAK RVG 6500 System, complies with Directive 93/42/CEE relating to medical equipment.

CE
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1 Conventions in This Guide

Conventions in this Guide

The following special messages emphasize information or indicate potential risk to personnel or equipment:

WARNING: Warns you to avoid injury to yourself or others by following the safety instructions precisely.

CAUTION: Alerts you to a condition that might cause serious damage.

Important: Alerts you to a condition that might cause problems.

Note: Emphasizes important information.

Tip: Provides extra information and hints.

2 KODAK RVG 6500 Systems Packaging

KODAK RVG 6500 Systems Description

The KODAK RVG 6500 Systems is available in 2 configurations:

- The KODAK RVG 6500 System
  OR
- The KODAK RVG 6500 Intelligent Positioning System (IPS) System

The KODAK RVG 6500 Systems information applies to both KODAK RVG 6500 System as well as the KODAK RVG 6500 IPS System.

The KODAK RVG 6500 IPS System information applies only to information relevant to the IPS system.

Packaging of KODAK RVG 6500 System

The KODAK RVG 6500 System packaging is composed of the following boxes:

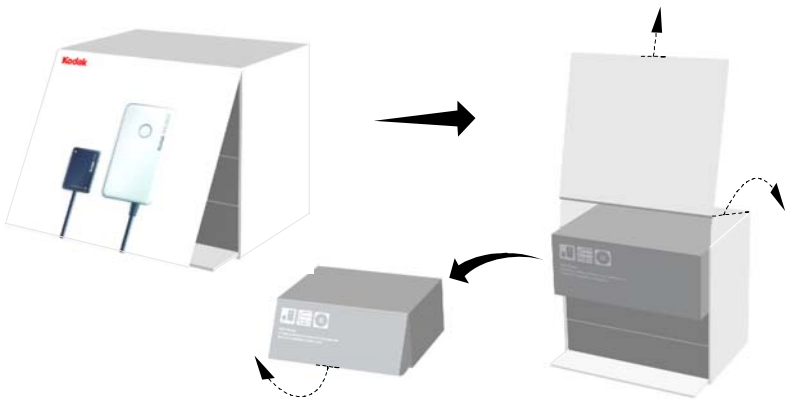
- The RVG sensor box
- The WiFi access point box
- The positioning kit box

Packaging of KODAK RVG 6500 IPS System

The KODAK RVG 6500 IPS System packaging is composed of the following boxes:

- The RVG sensor box with IPS features
- The IPS aiming ring box
- The WiFi access point box
- The positioning kit box

Opening the Boxes



3 KODAK RVG 6500 Systems Overview

KODAK RVG 6500 Systems Overview

- The KODAK RVG 6500 System
  OR
- The KODAK RVG 6500 Intelligent Positioning System (IPS) System

Figure 1 KODAK RVG 6500 System Components

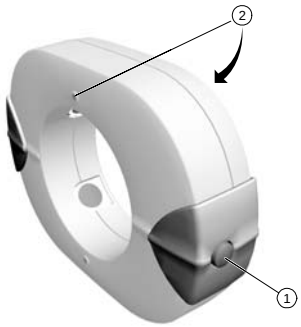
1 The sensor and the control box

2 The WiFi access point

3 The medical power supply for the RVG system

The KODAK RVG 6500 IPS System is composed of all the KODAK RVG 6500 system components and the IPS aiming ring. The IPS aiming ring enables you prior to acquisition to dynamically and visually center and align the X-ray beam to the RVG sensor.

Figure 2 IPS Aiming Ring

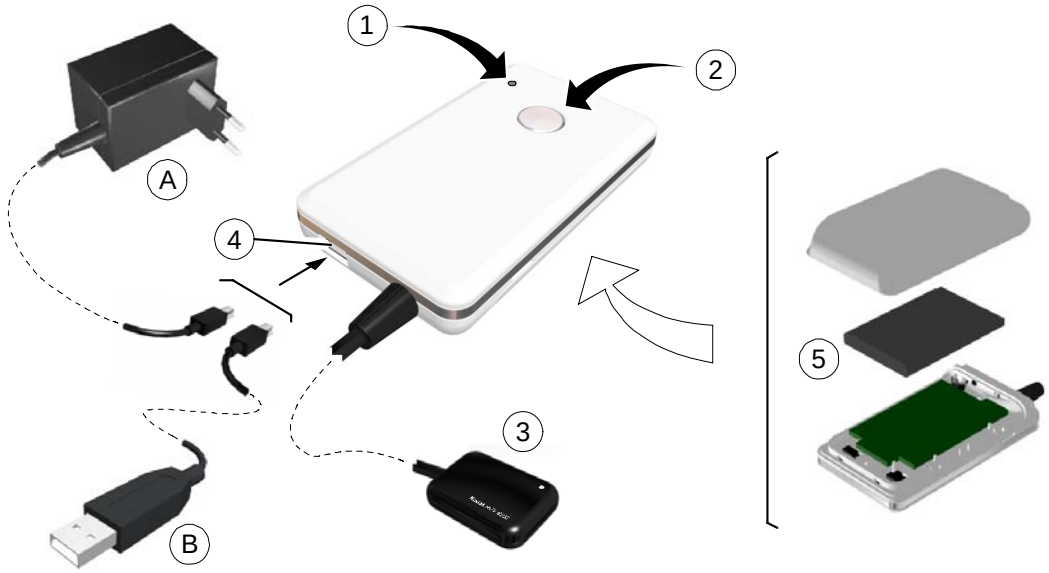


1 ON/OFF button: A quick push on the ON/OFF button will light the front or back LED.

2 4 LEDS

RVG Functional Components Overview

Figure 3 RVG Functional Components Overview



1 Battery status indicator LED:

●	Not charged
◉	Charging (blinking)
●	Charged with charger connection
OFF	Charged without charger connection

2 Sensor remote control button and the ON/OFF button:

●	OFF mode: Press 5 seconds to turn OFF
◉	• (Connecting to WiFi AP (blinking): Press 2 seconds to turn ON • Transmitting acquired x-ray image (blinking)
●	• Connected to WiFi AP • Standby mode
●	• Ready for acquisition • RFID tag is identified
●	Error mode

3 Sensor

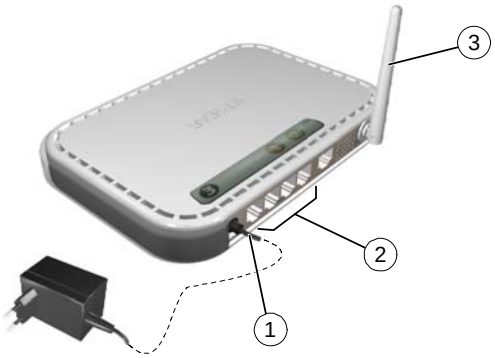
4 USB connector for battery charging
- (A) Medical charger
- (B) USB cable to charge with the computer

5 Battery

WiFi Access Point Functional Components Overview

The WiFi access point is the wireless equivalent of the wired internal Local Area Network (LAN). The WiFi access point provides connectivity between the computer and the RVG sensor(s) enabling you to use the KODAK RVG 6500 within your practice area. See the manufacturer guide for any detailed information on the WiFi access point.

Figure 4 WiFi AP Back Panel Overview

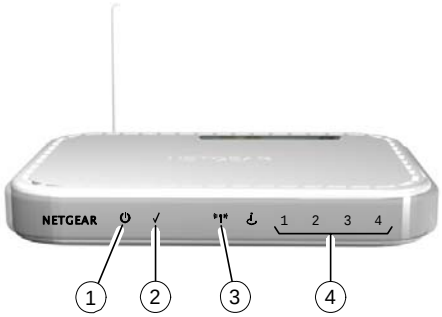


1 Power adapter outlet.

2 4 local LAN 10/100 Mpbs Ethernet ports for connecting the WiFi AP to the local computers.

3 Wireless antenna.

Figure 5 WiFi Access Point Front Panel Overview



1 Power indicator

2 Test indicator

3 Wireless transmission indicator

4 Local Area Network (LAN) indicator

4 Imaging Software Overview

Computer System Requirements

For the minimum computer system requirements for KODAK RVG 6500 intraoral imaging system software, see *KODAK RVG 6500 System and KODAK RVG 6500 IPS System Safety, Regulatory and Technical Specifications User Guide (SM737)_Ed02*. If necessary you must update your computer system configuration.

The computer and its screen should ideally be situated in or close to the operating area, in the visual field of the practitioner when he is with the patient. The visual access of the acquired image for the patient encourages communication.

The KODAK RVG 6500 systems must run on a computer with a keyboard.

The KODAK RVG 6500 systems must run on a computer with a mouse equipped with a right and left button and a mouse wheel.

Important: It is MANDATORY to check that the computer system configuration is compatible with the computer system requirements for the KODAK RVG 6500 software.

Important: The screen with the proper technical display characteristics for visualization of radiological images will avoid any diagnostic error.

General Software Overview

The KODAK RVG 6500 intraoral imaging system operates with the following software:

- KODAK dental imaging software
- KODAK RVG 6500 systems software modules:
  - RVG acquisition interface
  - Intelligent Positioning System (IPS) interface (optional)
  - RVG Mobile Application for iPhone®/iPod® touch (optional) (see the relevant section)

KODAK Dental Imaging Software

The KODAK dental imaging software is a user-friendly working interface that was designed and developed specifically for radiological diagnosis. It is the common imaging platform for all our digital systems for dentistry.

The KODAK dental imaging software has the following features:

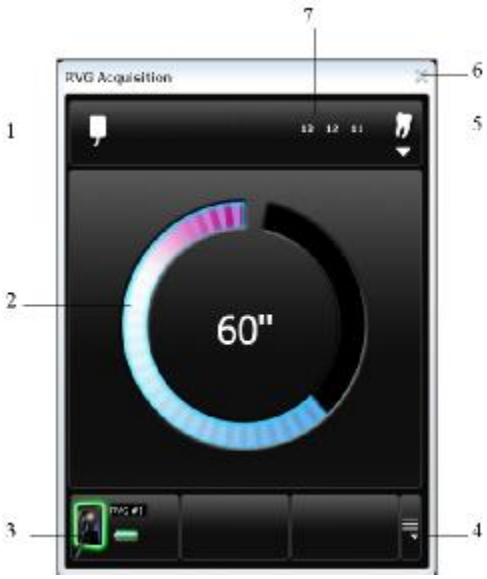
- Patient record management using Patient Window features.
- Extraoral and intraoral image management using Imaging Window features.

> Note: For a complete information on how to use the KODAK Dental Imaging Software, click ? in the menu bar to access the online help, or see *SM691 KDIS Quick Start Guide.*

The RVG Acquisition Interface Overview

The RVG Acquisition interface module is a user-friendly working interface that was designed and developed specifically for the KODAK RVG 6500 intraoral imaging system.

Figure 6 RVG Acquisition Main Interface



1 Sensor orientation: Pre-orients how the x-ray image is displayed in the Imaging Window.

2 Preview screen:
- Indicates the 90 second activation time for acquisition.
- Displays the acquired x-ray image instantly after acquisition.

3 Available sensor(s): Displays maximum 3 sensors with their name, sensor status and battery status.
- Blue: Sensor on standby
- Green: Sensor ready for acquisition
- Red: Error mode

4 Sensor list: Accesses the list of the sensors (see Figure 7).

5 Dental arch interface: Accesses the dental arch interface for tooth selection (see Figure 8).

6 Exit button: Exits the Acquisition Interface.

7 Tooth display: Displays the selected tooth number.

Figure 7 List of Available Sensors

The sensor name and battery status:

Battery status.

The WiFi status:

Wifi transmission is available.

Wifi transmission is available but not good.

WiFi transmission is not available.

The Sensor availability:

Sensor is connected to your computer and ready for use. Click

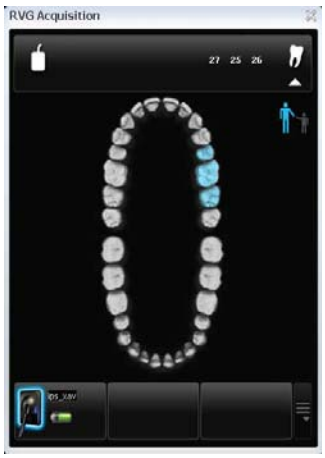
to disconnect.

Sensor is not connected to your computer. Click

to connect.

Refresh button refreshes the list of sensors visible in the computer.

Figure 8 Dental Arch for Tooth Selection

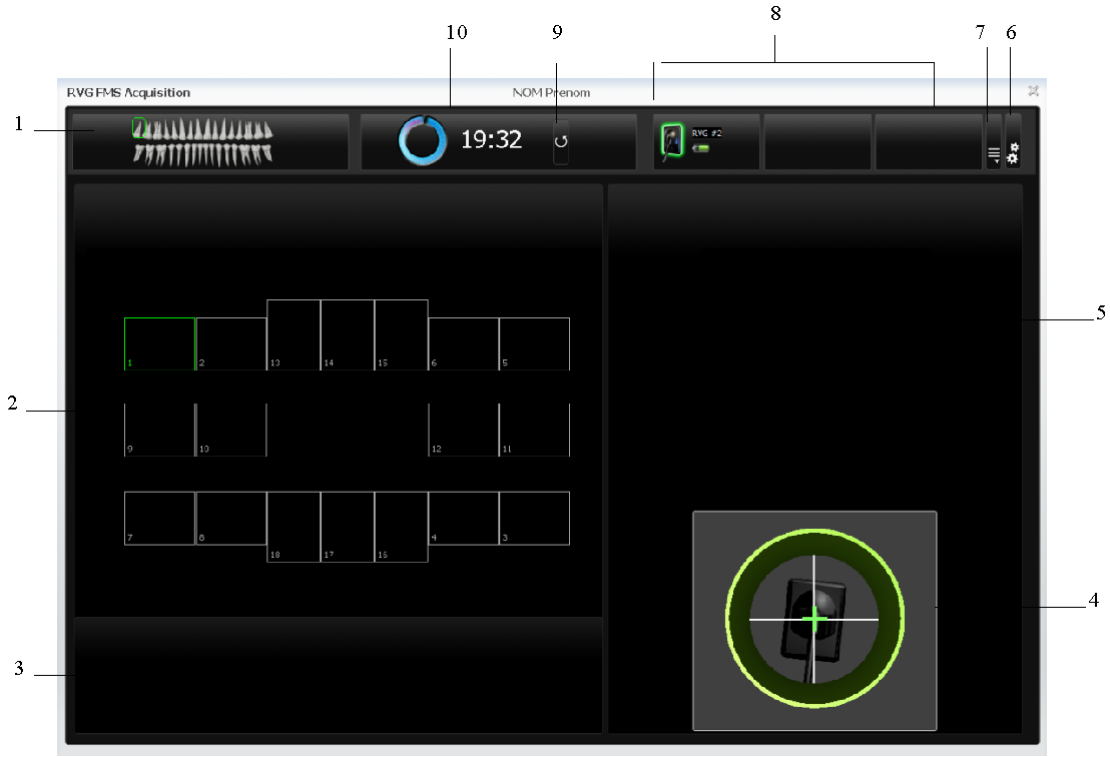


The Dental Arch enables you to select the desired tooth or teeth for acquisition. This selection is displayed as shown in the **Figure 8**.

The FMS Acquisition Interface Overview

The **FMS Acquisition** interface module is a user-friendly working interface that was designed and developed specifically for the KODAK RVG 6500 intraoral imaging system. The Full Mouth Series (FMS) is a static representation of the patient's mouth using a series of intraoral images. The images are placed in fixed numbered frames.

Figure 9 FMS Acquisition Interface Home Page



1 **Dental arch:** Highlights the acquisition zone (in near future, there will be an icon to enable you to switch between adult and child dental arch).

2 **FMS template:** Displays frame templates for acquisition.

- Green highlight: Frame ready for new acquisition
- Blue highlight: Frame in the revue and retake mode. This mode interrupts the automatic acquisition sequence. The retake images are displayed in the **Retake Image gallery**.

3 **Retake Image gallery:** Displays all the retake images acquired for a specific frame.

4 **IPS interface (optional):** Displays the sensor's location in the IPS for correct adjustment.

5 **Preview screen:** Displays the current acquired image.

6 **Preference button:** Displays the preference dialog box for FMS template selection.

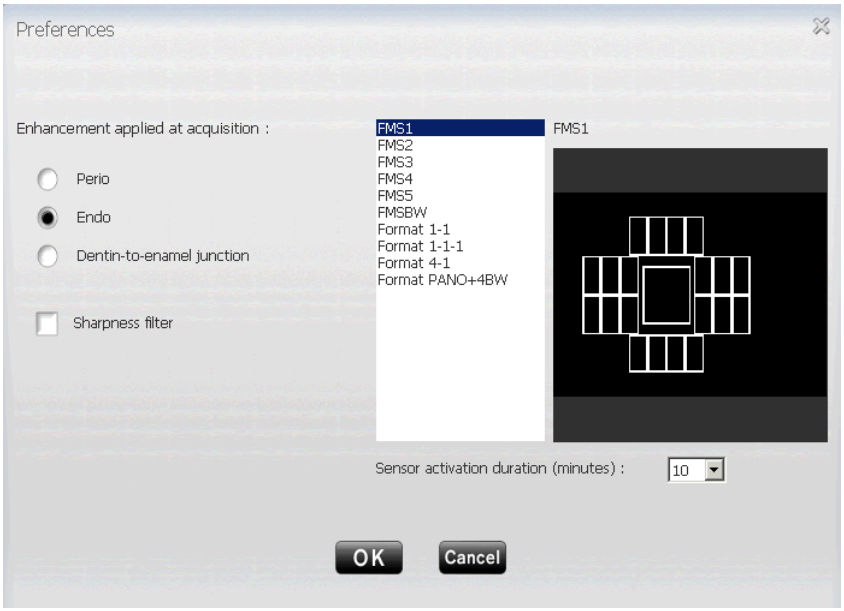
7 **Sensor list:** Accesses the list of the sensors connected to the PC.

8 **Available sensor(s)**: Displays maximum 3 sensors with their name, sensor status and battery status.

9 **Refresh button:** Relaunches the timer.

10 **Timer:** Displays the timer for acquisition.

Figure 10 FMS Preference Dialog Box



The preference dialog box enables you to select:

Enhancement applied at acquisition	Image enhancement type applied to acquired images: • **Perio**: Optimizes the display of periodontal tissues. • **Endo**: Optimizes the contrast values over the entire range (by default). • **Dentin-Enamel Junction**: Optimizes the values at the crown, the amelo-dentinal junction and the roots.
Sharpness filter	Image filtering to increase image contrast applied to acquired images.
FMS templates	FMS template options to select for acquisition.
Sensor activation duration (minutes)	Acquisition timer duration (maximum 30 minutes) depends on the FMS template choice and it can be adjusted using the minutes drop-down list.

You can select your preferences before starting to acquire images.

If you try to change the FMS template after you finished your acquisitions you are prompted with a warning that indicates that you risk loosing some of the images.

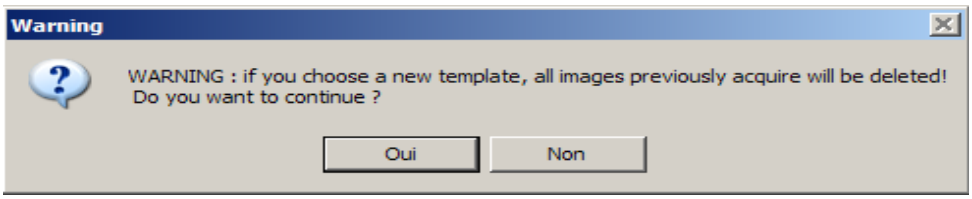
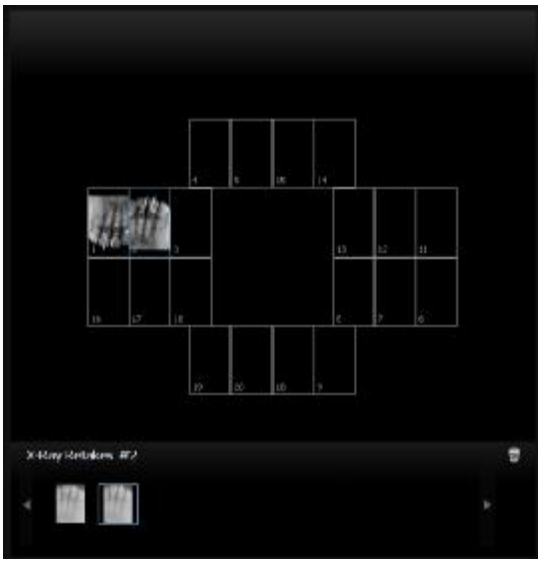
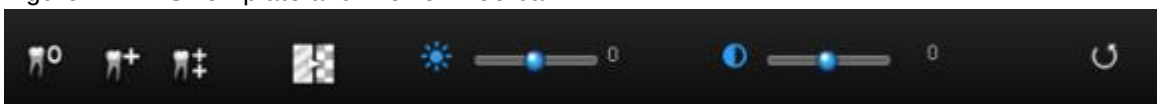

Warning
WARNING : if you choose a new template, all images previously acquire will be deleted!
Do you want to continue ?
Oui
Non

Figure 11 FMS Retake Image Gallery



The FMS retake image gallery displays only the images acquired for the frame highlighted in blue in the FMS template. A blue tag on the corner of the FMS frame indicates that there are retake images for this specific frame.

Figure 12 FMS Template and Preview Toolbar



The FMS image enhancement toolbar applies either to a single selected frame (highlighted in blue) or to the entire FMS template.

Perio: Optimizes the display of periodontal tissues.

Endo: Optimizes the contrast values over the entire range.

Dentin-Enamel Junction: Optimizes the values at the crown, the amelo-dentinal junction and roots.

Sharpness enhancement: Optimizes

Brightness enhancement: Optimizes the brightness of the acquired image.

Contrast enhancement: Optimizes the contrast of the acquired image.

Refresh button: Resets to the initial state of the current image.

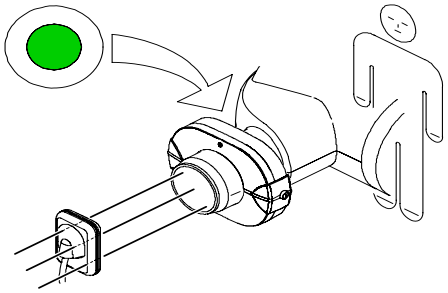
Important: All the image enhancements applied to the images as well as all the retake images, will be transferred to the KODAK Dental Imaging Software when you close the FMS acquisition

The IPS Aiming Ring Interface Overview

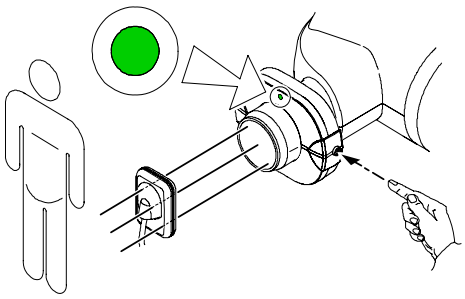
The IPS aiming ring interface is a user-friendly working interfaces that was designed and developed specifically for the KODAK RVG 6500 IPS System intraoral imaging system. It enables you prior to acquisition to dynamically and visually center the x-ray beam to the RVG sensor using the centering indicator.

IPS Aiming Ring Interface and RVG Sensor Display

The IPS aiming ring interface displays the RVG sensor according to where you are positioned, that is, in front or behind the aiming ring. The operator where positioned (in front or behind) must always see the LED (front or back) of the aiming ring ON. A quick push on the ON/OFF button will light the front or the back LED.



- Operator is positioned behind the aiming ring.
- Back LED is ON.
- Sensor active side is displayed.



- Operator is positioned in front of the aiming ring.
- Front LED is ON.
- Sensor back side is displayed.

IPS Aiming Ring Interface and RVG Sensor Centering

The IPS aiming ring interface enables you to correctly position the X-ray generator to the RVG sensor. The IPS interface enables you to manage the X-ray centering and the proper paralleling technique achievement.

Sensor Display

- Sensor is not centered.
- Centering indicators are red.

Result

- Sensor active surface not fully exposed to X-ray.
- Image will have a cone cut.
- Parallel technique not achieved.
- Image distortion.

Sensor Display

- Sensor is centered.
- Centering indicators are red.

Result

- Sensor active surface is fully exposed to X-ray;
- Image will have no cone cut.
- Parallel technique not achieved.
- Minimized risk of magnification and distortion.

Sensor Display

- Sensor is centered.
- Centering indicators are green.

Result

- Sensor active surface is fully exposed to X-ray;
- Image will have no cone cut.
- Parallel technique achieved*.
- Minimized risk of magnification and distortion.

Important: *The paralleling technique is achieved when the digital sensor plane is placed parallel to the real axis of the tooth in the patient's mouth. This correct positioning is under the operator's responsibility.

The RVG Mobile Application Overview

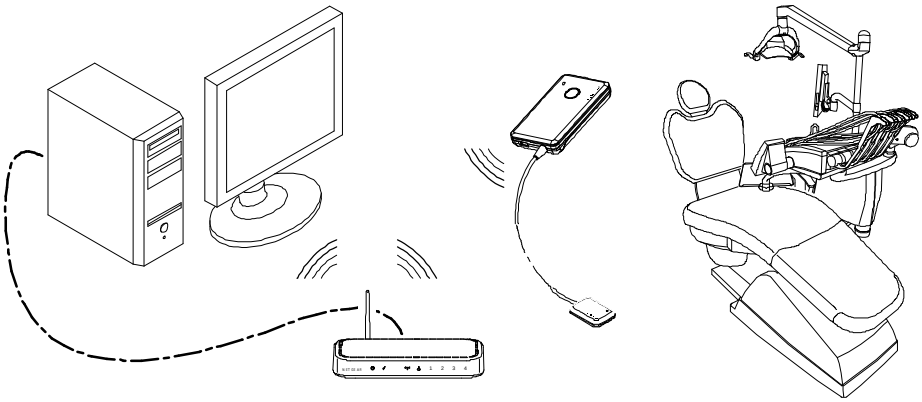
For the RVG Mobile Application overview, see **“The RVG Mobile Application Overview”** .

5 Setting Up the KODAK RVG 6500 Systems

Important: Your computer must have an available Ethernet board and be WiFi equipped before installing the KODAK RVG 6500 systems.

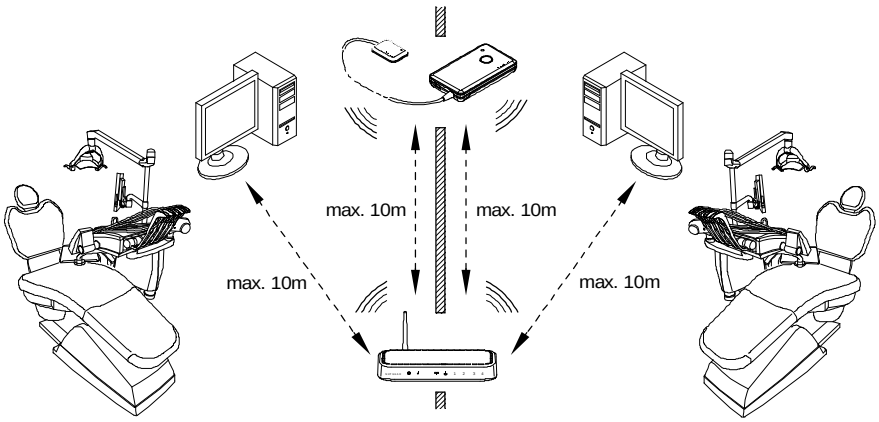
KODAK RVG 6500 Systems Configuration Options

Option 1: Single RVG Sensor / Single PC / Single Access Point Configuration



- Single WiFi AP wired setup (see: For a first system configuration "Installing the KODAK Dental Imaging Software" . For reconfiguration "Starting the Configuration Setup").
- Direct RVG sensor connection to the PC (see "Locking a Single RVG Sensor to the Computer.")

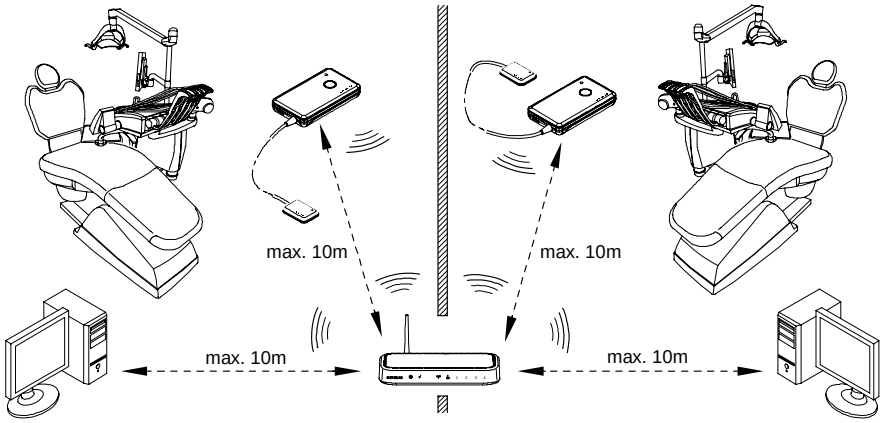
Option 2: Single RVG Sensor / Multi-PC / Single Access Point Configuration



- Single WiFi AP wireless setup (see: For a first system configuration "Installing the KODAK Dental Imaging Software" . For reconfiguration "Starting the Configuration Setup").

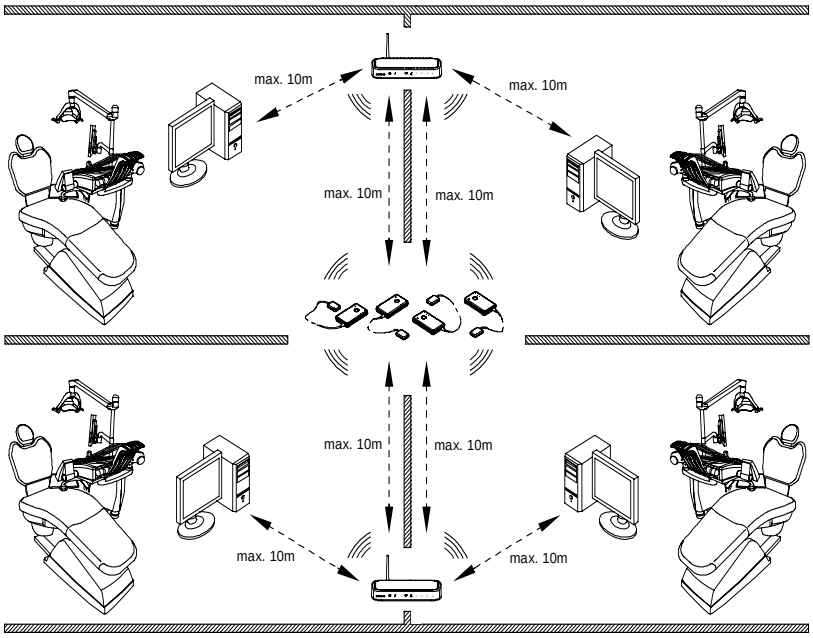
- RFID RVG sensor connection to multi-PCs (see **“Connecting an RVG RFID Sensor to the Computer”**). This is a recommended configuration.
- **OR**
- Manual RVG sensor connection to multi-PCs (see **“Locking a Single RVG Sensor to the Computer.”**). This is a possible configuration but **not recommended**.

Option 3: Multi-RVG Sensor / Multi-PC / Single Access Point Configuration



- Single WiFi AP wireless setup (see: For a first system configuration **“Installing the KODAK Dental Imaging Software”** . For reconfiguration **“Starting the Configuration Setup”**).
- RFID RVG sensor connection to multi-PCs (see **“Connecting an RVG RFID Sensor to the Computer”**). This is a recommended configuration.
- **OR**
- Manual RVG sensor connection to multi-PCs (see **“Locking Several Shared RVG Sensors to the Computer.”**). This is a possible configuration but **not recommended**.

Option 4: Multi-RVG Sensor / Multi-PC / Multi-Access Point Configuration



- Multi-WiFi AP wireless setups (see: For a first system configuration **“Installing the KODAK Dental Imaging Software”** . For reconfiguration **“Starting the Configuration Setup”**).
- **Mandatory,** RFID RVG sensor connection to multi-PCs (see. **“Connecting an RVG RFID Sensor to the Computer”**).

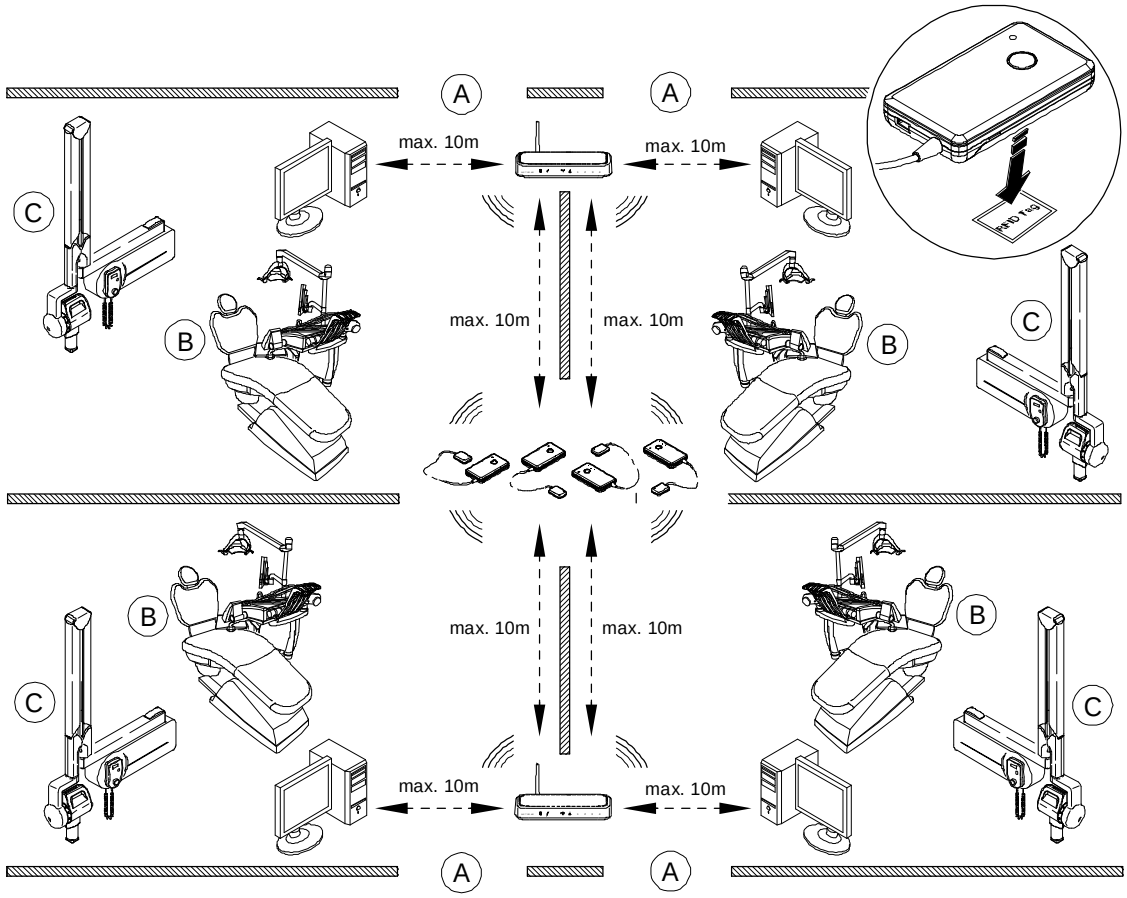
RFID Tag(s) Possible Locations

The RFID Tag is a smart microchip label that stores specific WiFi access point and computer or Apple device data. The RVG control box when placed on this RFID Tag, scans and reads this data. This data will enable the acquired image to appear where it is desired.

Important: DO NOT stick the RFID tag on a metalic surface.

Important: You must place the RFID RVG control box on the RFID Tag to scan and read the data.

You must locate the RFID Tag(s) in the patient environment, for example, at the entrance (A) of the exam room, the chair (B) or the X-ray generator (C).



WiFi Access Point Setup Configurations

There are 2 WiFi access point setup configuration options:

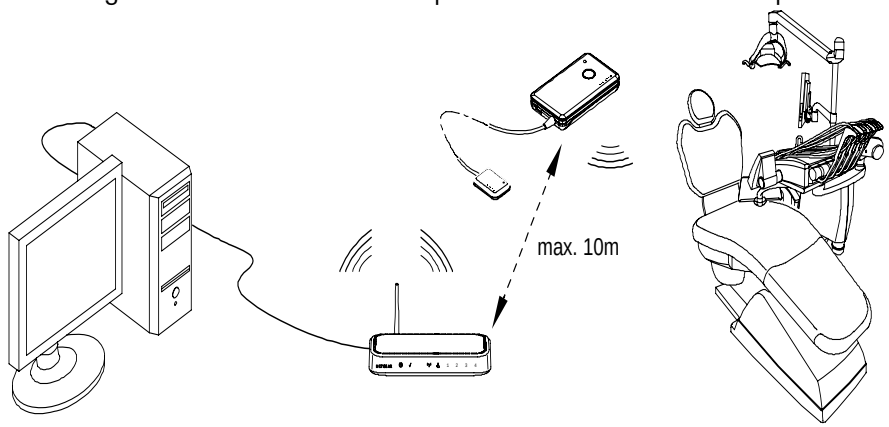
- The **wired** WiFi access point setup configuration (recommended only for **"Option 1: Single RVG Sensor / Single PC / Single Access Point Configuration"**)
- The **wireless** WiFi access point setup configuration

You must decide the KODAK RVG 6500 system configuration option before starting the WiFi setup. Once you have decided you will be guided by the setup software (see **Installing the Setup Installation Software**).

WiFi Access Point Wired Configuration Setup

You can choose to have a wired WiFi access point configuration. In this configuration setup, the WiFi access point is connected to a single computer through an Ethernet cable. Several sensors can be connected to the same access point and computer.

The transmission range between the WiFi access point and the RVG sensor is up to 10 meters.



WiFi Access Point Wireless Configuration Setup

You can choose to have a wireless WiFi access point configuration. In this configuration setup, the computer is connected to the WiFi access point through a router, that is, through a dongle or a PCI card. In this configuration, several sensors can be connected to the same access point and shared between several computers and chairs.

For optimal WiFi access point wireless setup, follow these setup recommendations:

- Place the WiFi access point in a visible and high location (not on the floor).
- Place the WiFi access point in a central location for a multiple access point transmission.
- Avoid any barriers along the line of transmission, for example, armored wall and door, cabinets, effronteries and metal file cabinets.
- Install the WiFi access point at 1 meter distance from other appliances transmitting the same frequency range.
- Install the WiFi access point away from electrical equipment that also generates interferences.

In this configuration, the transmission range between WiFi access point and:

- The RVG sensor is up to 10 meters.
- The computer is up to 10 meters.

Installing the KODAK Dental Imaging Software

Before installing the KODAK Dental Imaging Software, check that:

- The computer has all the PC system requirements
- You have the software DVD as of **version 6.12 or higher**

To install the KODAK Dental Imaging Software, follow these steps:

1 Insert the software DVD in the DVD-ROM drive of the computer.

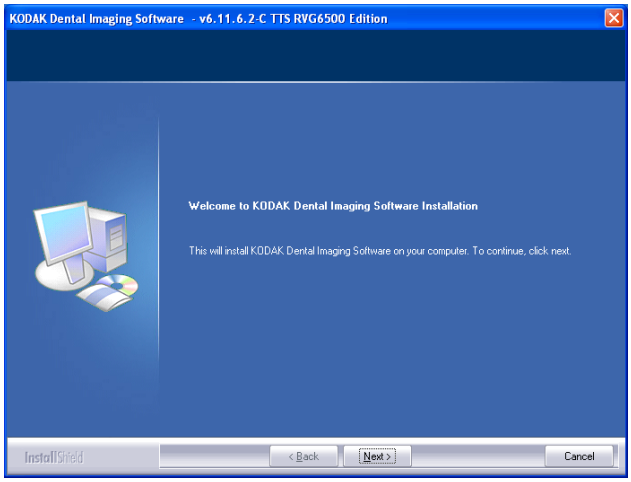
Wait for the installation program to start. If the program does not start automatically, click **Start > Run** and enter **D:\setup.exe** if D is the letter for the DVD-ROM drive, or the letter of the relevant drive on the computer.

2 The **Choose Setup Language** dialog box is displayed. Select the installation language and click **OK.**

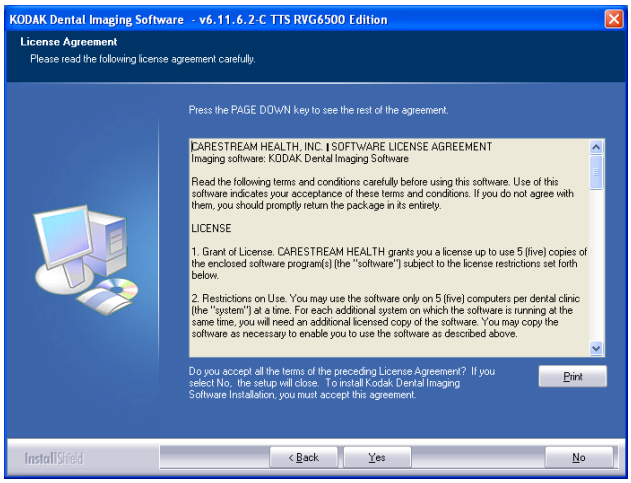
3 The **Kodak Dental Imaging Software** welcome page and the **InstallShield wizard** are displayed.

InstallShield Wizard
Kodak Dental Imaging Software Installation Setup is preparing the InstallShield Wizard, which will guide you through the program setup process. Please wait.
Checking Operating System Version
Cancel

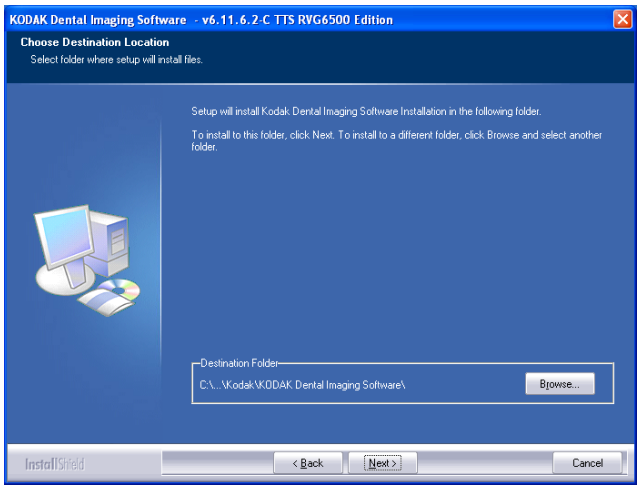
4 The **Welcome to KODAK Dental Imaging Software Installation** dialog box is displayed. Click **Next** to launch the installation.


KODAK Dental Imaging Software - v6.11.6.2-C TTS RVG6500 Edition
Welcome to KODAK Dental Imaging Software Installation
This will install KODAK Dental Imaging Software on your computer. To continue, click next.
InstallShield
< Back
Next >
Cancel

5 The **License Agreement** dialog box is displayed. Accept and click **Yes.**


KODAK Dental Imaging Software - v6.11.6.2-C TTS RVG6500 Edition
License Agreement
Please read the following license agreement carefully.
Press the PAGE DOWN key to see the rest of the agreement.
CARESTREAM HEALTH, INC. SOFTWARE LICENSE AGREEMENT
Imaging software: KODAK Dental Imaging Software
Read the following terms and conditions carefully before using this software. Use of this software indicates your acceptance of these terms and conditions. If you do not agree with them, you should promptly return the package in its entirety.
LICENSE
1. Grant of License. CARESTREAM HEALTH grants you a license up to use 5 (five) copies of the enclosed software program(s) (the "software") subject to the license restrictions set forth below.
2. Restrictions on Use. You may use the software only on 5 (five) computers per dental clinic (the "system") at a time. For each additional system on which the software is running at the same time, you will need an additional licensed copy of the software. You may copy the software as necessary to enable you to use the software as described above.
Do you accept all the terms of the preceding License Agreement? If you select No, the setup will close. To install Kodak Dental Imaging Software Installation, you must accept this agreement.
Print
InstallShield
< Back
Yes
No

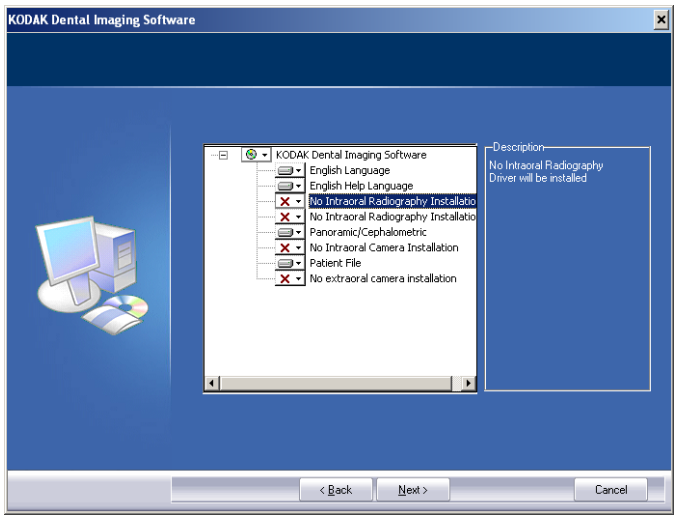
6 The **Choose Destination Location** dialog box is displayed. Click **Next** if you accept the default destination folder (c:\program files\Kodak\Kodak Dental Imaging Software) or browse to choose another destination folder.


KODAK Dental Imaging Software - v6.11.6.2-C TTS RVG6500 Edition
Choose Destination Location
Select folder where setup will install files.
Setup will install Kodak Dental Imaging Software Installation in the following folder.
To install to this folder, click Next. To install to a different folder, click Browse and select another folder.
Destination Folder
C:\...\Kodak\KODAK Dental Imaging Software\
Browse...
InstallShield
< Back
Next >
Cancel

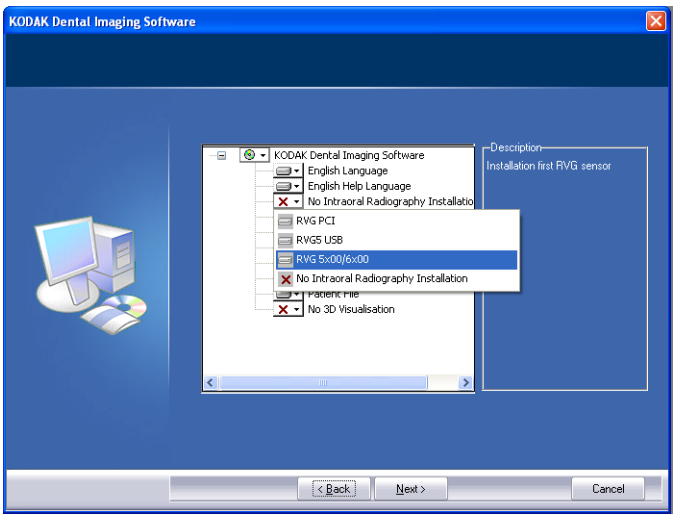
7 The **KODAK Dental Imaging Software** dialog box is displayed. The **Patient file** is selected by default but you must select the device.

8 To select the desired device, do the following:

〈 Click on the drop-down list of **No Intraoral Radiography Installation.**

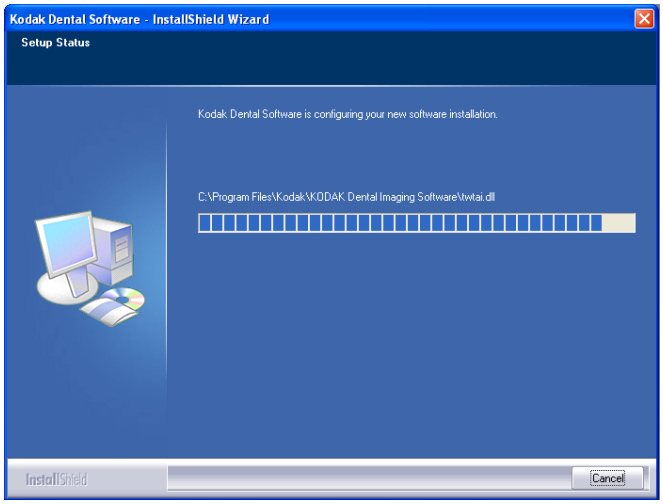


〈 Select **RVG 5x00/6x00**.



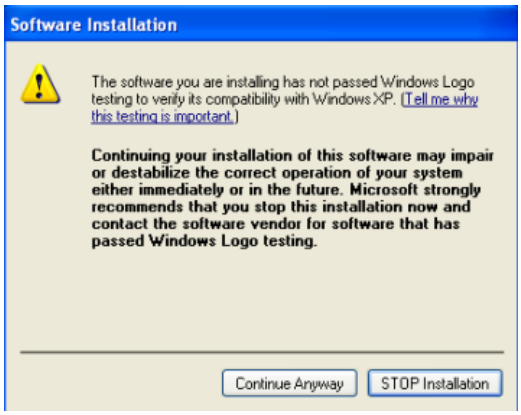
〈 Click **Next** to begin the installation.

The **InstallShield Wizard** is displayed. Let the installation process run automatically.

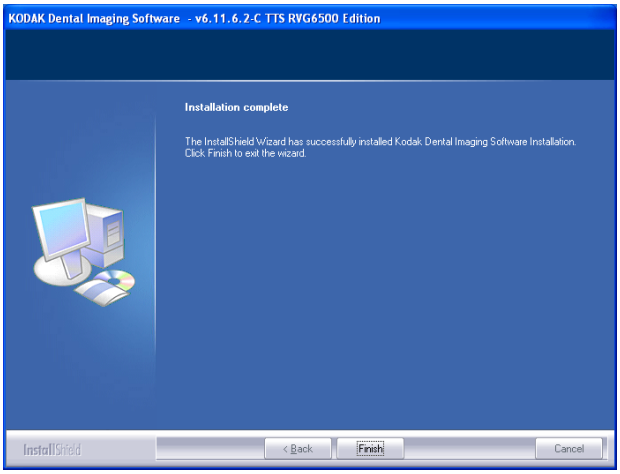

Kodak Dental Software - InstallShield Wizard
Setup Status
Kodak Dental Software is configuring your new software installation.
C:\Program Files\Kodak\KODAK Dental Imaging Software\twtai.dll
InstallShield
Cancel

The **Kodak Patient file - InstallShield Wizard** is displayed while the patient files are installed on the hard drive.

The **Software Installation** dialog box is displayed while the installation process continues. Click **Continue Anyway** until the dialog box disappears.


Software Installation
The software you are installing has not passed Windows Logo testing to verify its compatibility with Windows XP. (Tell me why this testing is important.)
Continuing your installation of this software may impair or destabilize the correct operation of your system either immediately or in the future. Microsoft strongly recommends that you stop this installation now and contact the software vendor for software that has passed Windows Logo testing.
Continue Anyway
STOP Installation

9 The **Installation Complete** dialog box is displayed when the installation is finished. Click **Finish**.


KODAK Dental Imaging Software - v6.11.6.2-C TTS RVG6500 Edition
Installation complete
The InstallShield Wizard has successfully installed Kodak Dental Imaging Software Installation. Click Finish to exit the wizard.
InstallShield
< Back
Finish
Cancel

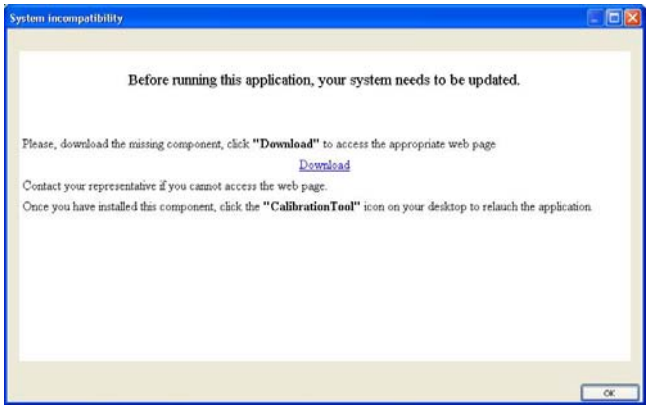
The

and are installed on your desktop.

If your computer operating system is not compatible with the system requirements follow the instructions below, otherwise go to step 13.

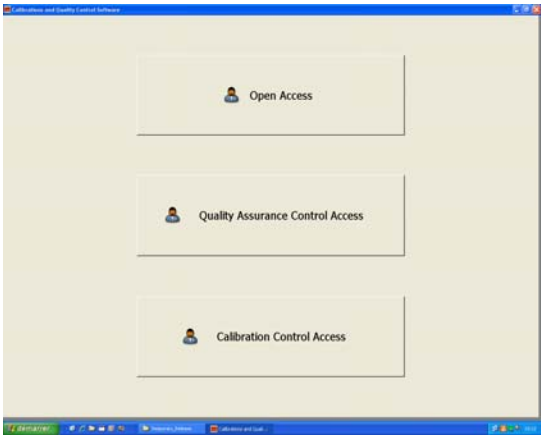
If your PC operating system is not compatible with the system requirements

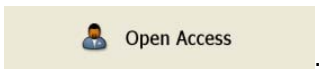
If your PC operating system is not compatible with the system requirements, the System incompatibility dialog box is displayed. Click Download, your application will close automatically.


System incompatibility
Before running this application, your system needs to be updated.
Please, download the missing component, click "Download" to access the appropriate web page
Download
Contact your representative if you cannot access the web page.
Once you have installed this component, click the "CalibrationTool" icon on your desktop to relaunch the application.
OK

Follow the on-screen instructions to install the required “Windows Wireless component”. Reboot your PC when the installation is completed.

10 Click on your desktop. The **Calibration and Quality Control Software** window is displayed.



11 Click 

. The **Calibration Tools** window is displayed.

12 In the central pane, click RVG Wireless System Configuration, to access the “Setting Up the WiFi AP” window (see and follow step 10).

Starting the Configuration Setup

13 Before the setting up of the KODAK RVG 6500 System procedures, have with you the:

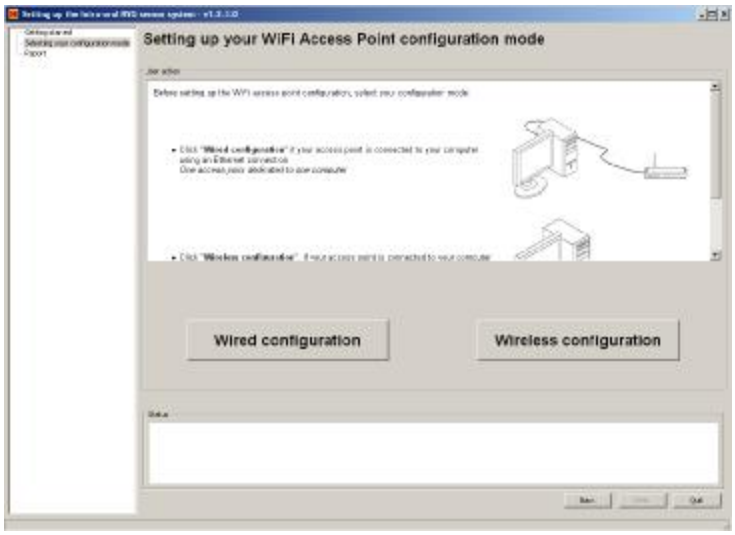
SSID	Password
RVG8_NETWORK	7794AA6500EC239BFF4554DD80

14 The “Setting Up the wirless RVG Sensor system” window is automatically displayed.

You have 3 setup options:

- Full system configuration: When you want to configure the entire system.
- Wireless intraoral configuration: configures your intraoral sensor into an existing wireless network.
- New RFID tag: When your current system configuration is correct and you only want to configure a new RFID tag.

15 Click Full system configuration and follow the on-screen instructions to setup the RVG system



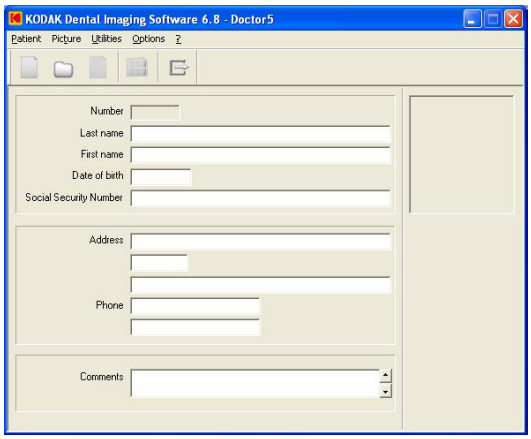
Click New RFID tag creation and follow the on-screen instructions to configure a new RFID tag.

Once you have finished setting up the RVG system, you must register the KDIS Licence.

Registering the KDIS Licence

To register the KDIS licence, follow these steps:

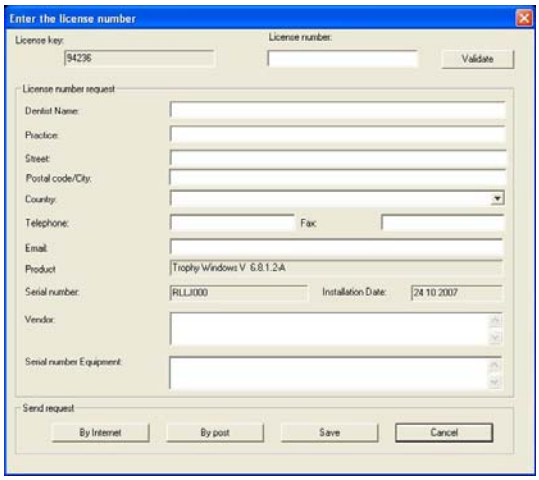
1 Double-click to open the **Patient Window**.



2 Create a patient record. From the toolbar, click and enter the required patient information.

Click to access the **Imaging Window**.

3 The **Enter the licence number** dialog box is displayed. Enter the licence number and click **Validate** if you have the licence number or click **Cancel** to continue.



The icon appears on the toolbar of the **Imaging Window**.

For the RVG Mobile Application installation (optional), see Chapter 7.

Mounting the RVG Holders

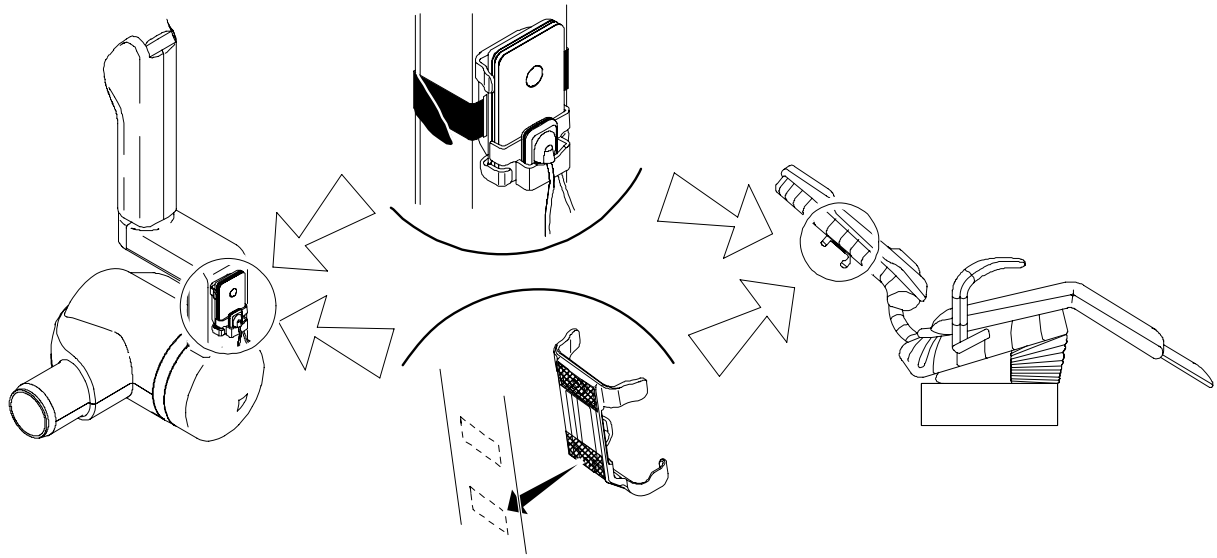
The RVG sensor and control box holders enable you to have them at reach to optimize your workflow. You need to install the RVG sensor and control box holders where it best suits your workflow, the X-ray generator arm, the chair, etc....

To mount the RVG sensor and control box holders, follow these steps:

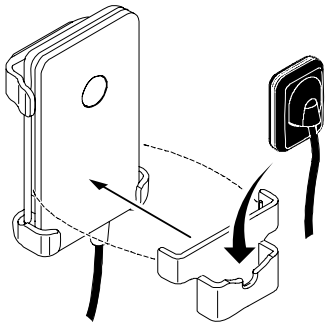
1 Attach the RVG control box holder with the double-face adhesive or the Velco strap supplied on the side of the X-ray generator arm.

You can also attach the RVG control box holder with the double-face adhesive or the Velco strap to the chair or any other flat surface close to the patient's chair.

The RVG control box holder can also be mounted on the wall with screws (not supplied).



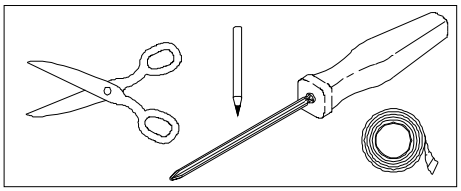
2 Clip the RVG sensor holder on the control box. Insert the RVG sensor in its holder.



Mounting the IPS Aiming Ring on the X-Ray Generator

Before mounting the IPS aiming ring, make sure that:

- You have the necessary tools:



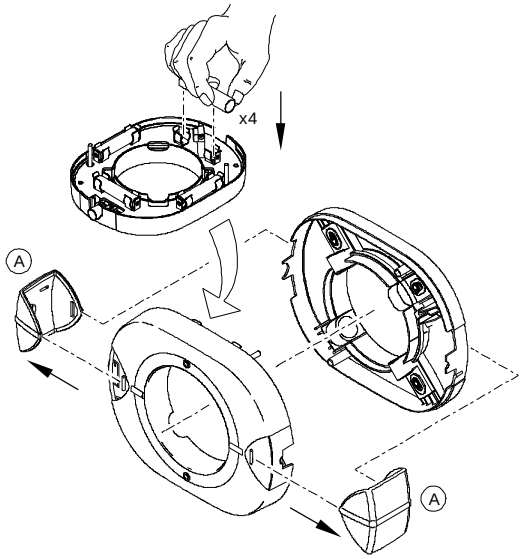
- You have cleaned the X-ray generator tube head with disposable cleaning wipes.
- You have asked the practitioner his preference for the position of the aiming ring on the X-ray tube head, with the ON/OFF button on the left or right side of the X-ray tube head.

To mount the IPS aiming ring on the X-ray generator tube head, follow these steps:

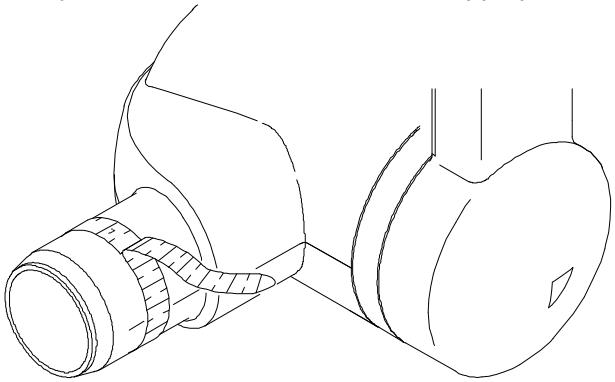
1 Remove the attachment brackets (A).

2 Remove the back cover.

3 Insert the 4 batteries on the board respecting the polarities.



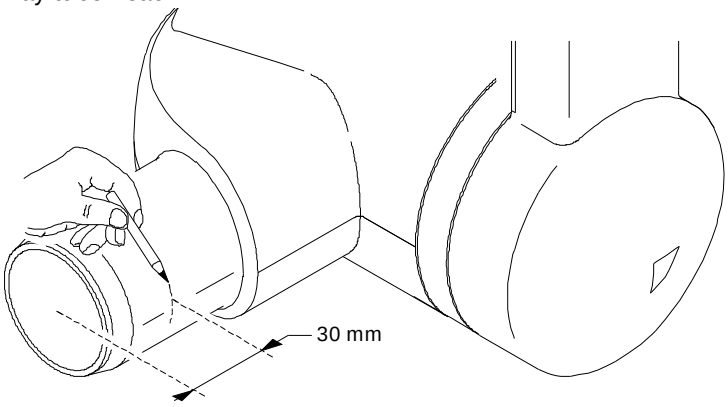
4 Measure the X-ray tube head diameter to select the appropriate aiming ring holding brackets.



5 Select the appropriate aiming ring holding brackets (B):

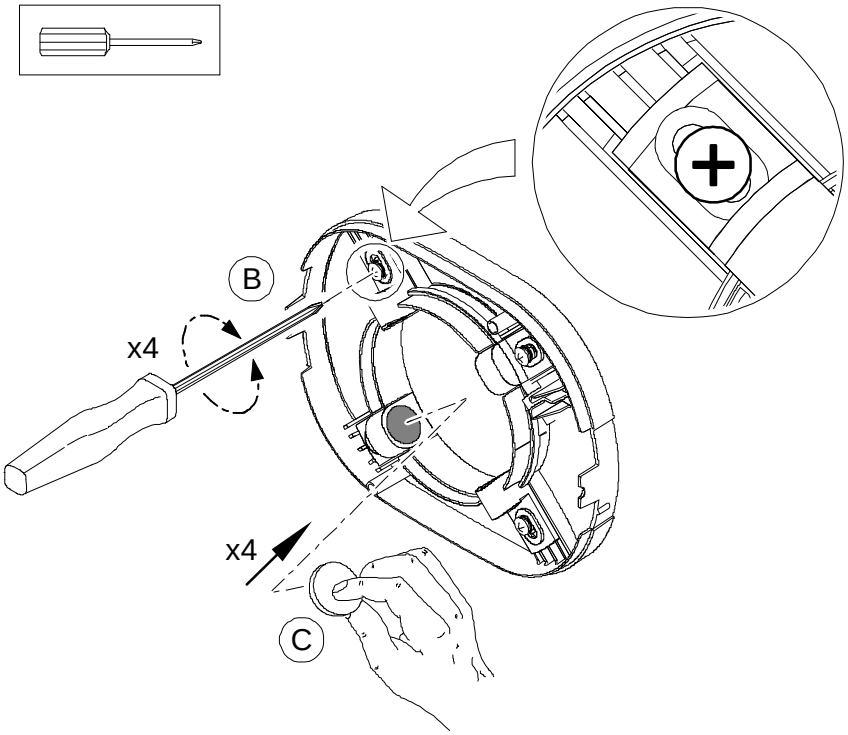
- For a cone shape x-ray tube head (HY415).
- For a cylindrical shape x-ray tube head with diameters from 55.5 mm to 65 mm (HY414).
- For a cylindrical shape x-ray tube head with diameters from 64 mm to 70.1 mm (HY413) mounted on the ring.

6 Measure from the opening of the x-ray tube head 30mm. Mark the 30mm with a pencil on both sides of the x-ray tube head.

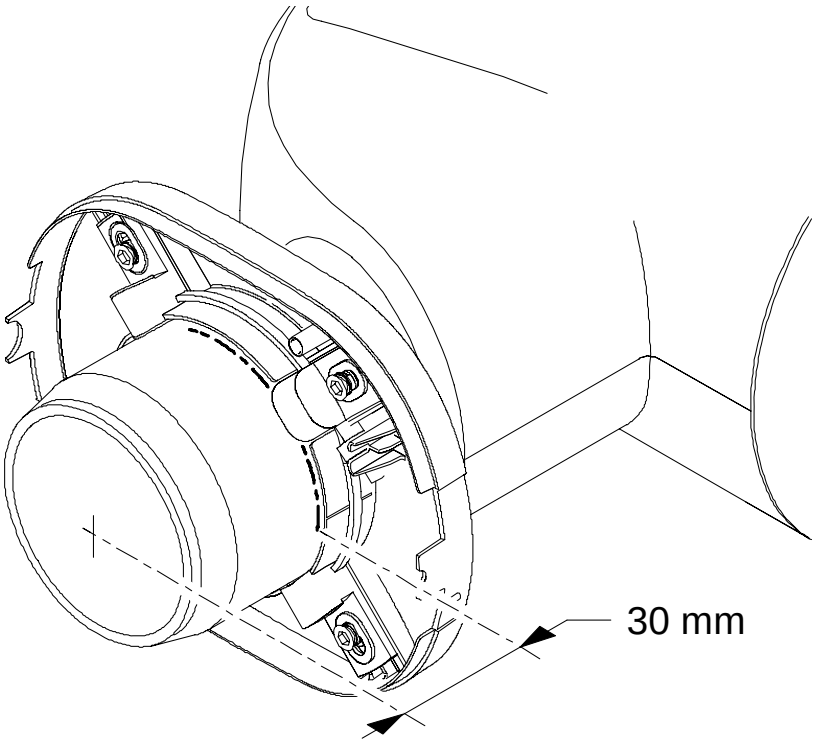


7 On the back cover, position the appropriate holding brackets (B) to adapt to the x-ray tube head diameter. Do not tighten the screws.

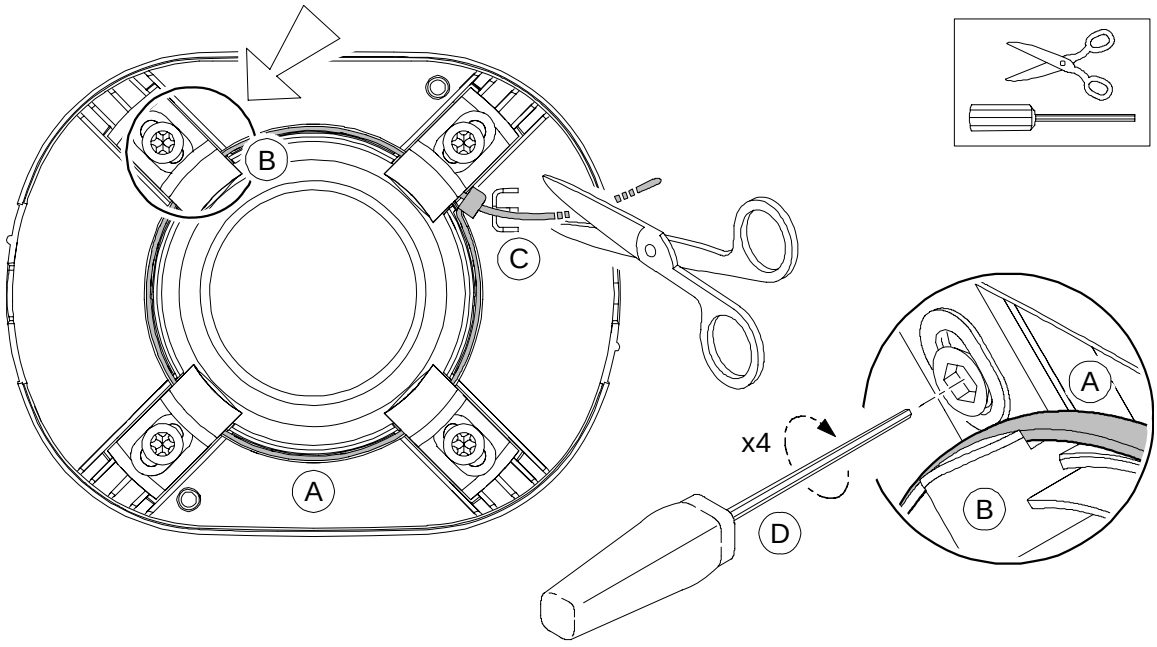
8 Stick the stickers on the back cover in the appropriate locations (C). Remove the protection on the stickers.



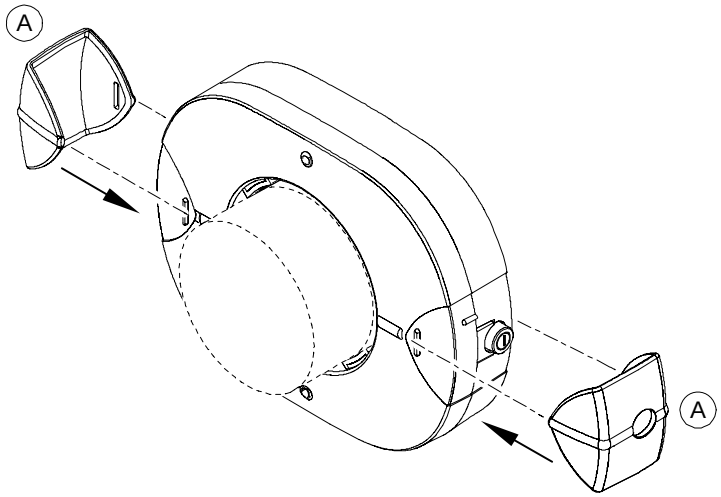
9 Position the inner ring of the back cover at the 30mm mark, on the x-ray tube head. Tighten the 4 screws.



10 Place the cable tie (A) around the holding brackets (B), make a knot and place it in the cable tie holder (C). Pull to tighten and cut what exceeds. Retighten the screws (D).



11 Position correctly the front cover with the board making sure that the ON/OFF button is on the appropriate place.



12 Position correctly the attachment brackets (A).

13 Press quickly the ON/OFF button to turn ON the IPS device and check that the front upper LED is lit.

Press quickly the ON/OFF button to turn ON the back upper LED to check that it is lit.

14 Press and hold the ON/OFF button until all the LEDs are ON, then let go the ON/OFF button to turn OFF the IPS.

The IPS aiming ring installation is finished.

6 Acquiring an Image

Connecting an RVG RFID Sensor to the Computer

You need to connect the selected RVG sensor to the computer where the acquired image must appear.

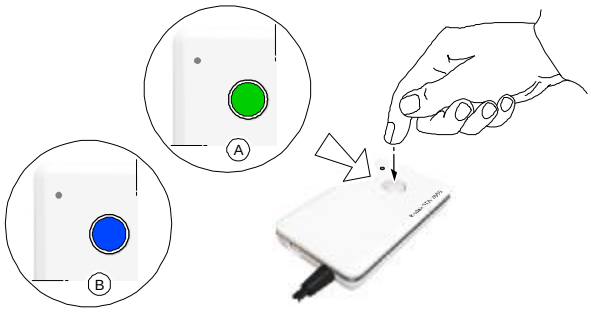
> Important: You can use the RVG sensor to acquire an image while charging ONLY with the medical charger.

To connect an RVG sensor to your computer, follow these steps:

1 Press the remote control button of the RVG control box to turn ON the device.

2 Place the RVG control box on the RFID tag.

3 Press quickly on the remote control button. The light becomes green (A) for one second indicating the Tag scanning. Once the scanning is done remove the control box and wait for the light to become solid blue (B).



> Note: if you change the access point (WiFi network), the light blinks blue before becoming solid blue.

The sensor is now connected to the WiFi access point and the selected computer.

4 Open the patient file. Access the Imaging Window. Click to access the RVG Acquisition interface.

You can also access the RVG Acquisition interface, doing the following:

- Press the remote control button of the selected RVG control box, or
- Press F2 on the computer key board.

Locking the RVG Sensor to the Computer (Manually)

You need to lock the RVG sensor to the computer where the acquired image must appear.

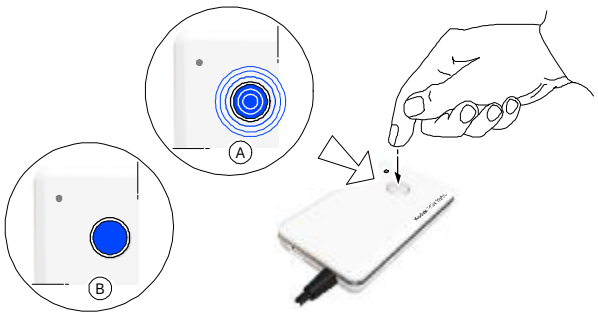
Important: You can use the RVG sensor to acquire an image while charging ONLY with the medical charger.

Locking a Single RVG Sensor to the Computer

If you have a single RVG sensor, you need to lock it only once to the computer where the acquired image must appear.

To Lock the RVG sensor to your computer, follow these steps:

1 Press the remote control button of the RVG control box to turn ON the device. The blinking blue light indicates the sensor attempt to connect to the WiFi access point. Wait for the blinking blue light (A) to become solid blue. (B) The sensor is connected to the WiFi access point.



2 Open the patient file. Access the Imaging Window. Click to access the RVG Acquisition interface.

You can also access the RVG Acquisition interface, doing the following:

- Press the remote control button of the selected RVG control box, or
- Press F2 on the computer key board.

3 In the **RVG Acquisition** interface, click to access the RVG sensor list.

4 Find the RVG sensor in the sensor list. The sensor is identified with

.

5 Click

to connect the sensor to your computer,

becomes

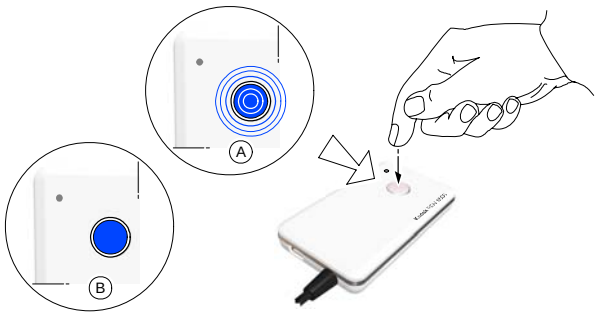
.

Locking Several Shared RVG Sensors to the Computer

If you have several shared RVG sensors, you need to lock the selected RVG sensor to the computer where the acquired image must appear.

To lock the selected RVG sensor to your computer, follow these steps:

1 Press the remote control button of the RVG control box to turn ON the device. The blinking blue light indicates the sensor attempt to connect to the WiFi access point. Wait for the blinking blue light (A) to become solid blue (B). The sensor is connected to the WiFi access point.



2 Open the patient file. Access the **Imaging Window.** Click to access the **RVG Acquisition** interface.

3 In the **RVG Acquisition** interface, click to access the RVG sensor list. If needed, click to refresh the sensor list.

4 Find the selected RVG sensor in the sensor list:

If

do the following:

Click

to lock the sensor to your computer,

becomes

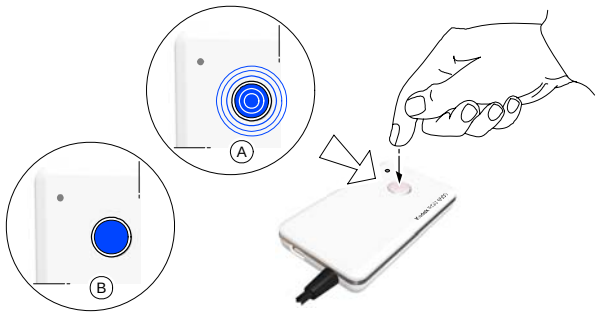
.

If

do the following:

Click

to unlock from the computer it is locked to and **press quickly on the remote control button while the light is blink blue (A)**. If the unlocking was not executed you must redo the unlocking process.



Click

to lock the sensor to your computer,

becomes

.

5 Click to return to the **RVG Acquisition** interface.

Acquiring an Image with the RVG Sensor

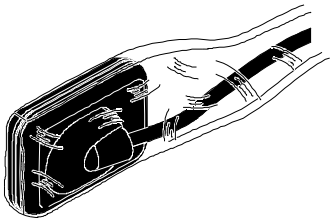
To acquire an image with the RVG sensor, follow the instructions in the presented order.

Preparing the RVG Sensor

To prepare the selected RVG sensor, follow these steps:

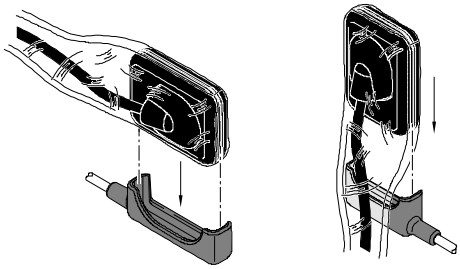
1 Select an appropriate positioner for the region of interest and the sensor size.

2 Cover with a disposable hygienic sleeves specifically designed for each sensor size.



Important: To prevent cross-contamination, use a new hygienic barrier for each new patient.

3 Place the protected RVG sensor in the sensor positioner's biteblock.



Preparing the X-Ray Generator

To prepare the x-ray generator, follow these steps:

1 Press the remote control button of the selected RVG control box to access the **RVG Acquisition** interface.

(Optional) Press on the remote control button several times to pre-orient the sensor orientation. The acquired image is displayed with the last selected orientation on the **Imaging Window.**

(Optional) Click To select the tooth or teeth number. Click to return to the **RVG Acquisition** interface. The selected tooth number is displayed on the **RVG Acquisition** interface.

2 Select the x-ray timing according to the region of interest and the patient type (follow the user instructions of your x-ray generator).

3 Insert the sensor holding it horizontally in the patient's mouth. Positioning in the patient's mouth depends on the region of interest.

4 Approach the x-ray generator tube head to the patient.

(Optional) If you are using the IPS aiming ring system, press the ON button. If you are in front of the aiming ring, make sure that the front LED is ON. If you are positioned in the back of the aiming ring, a quick press on the ON/OFF button will turn on the LED on the back.

5 Align the x-ray tube head with the patient's tooth and the sensor and make sure that the tube head is not shacking.

(Optional) If you are using the IPS aiming ring system, position the X-ray generator parallel to the active surface of the RVG sensor. When the RVG sensor is correctly centered in the ring the centring indicator becomes a green cross.

Important: The IPS aiming ring turns off after 90 seconds.

Launching the X-Ray

To launch the x-ray, follow these steps:

1 Ask the patient to remain still.

2 Position yourself either 2 meters behind the x-ray generator or outside the door.

3 Keep visual contact with the patient during the x-ray.

4 Trigger the x-ray with the remote control of the x-ray generator.

The image appears in the preview screen of the RVG Acquisition interface. The light on the remote control button blinks blue indicating the image transmission.

When the acquisition ends, the RVG Acquisition interface disappears and the acquired image is displayed in the Imaging Window. The light on the remote control button becomes solid blue.

5 Check the image quality. If not satisfactory, redo the x-ray.

6 If satisfactory, remove the generator tube head.

7 Remove the RVG sensor from the patient's mouth. Remove the hygienic sensor protection.

Important: DO NOT pull the sensor by its cable when you remove the hygienic protection.

7 Acquiring an Image with FMS Interface

Connecting an RVG RFID Sensor to the Computer

You need to connect the selected RVG sensor to the computer where the acquired image must appear.

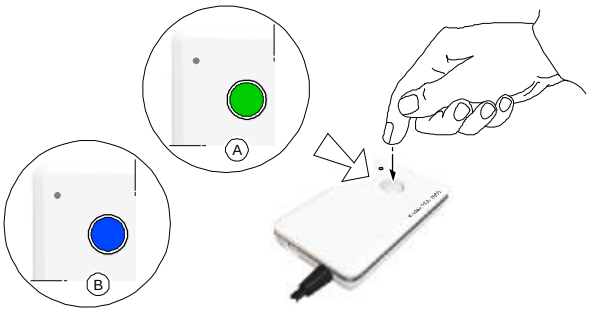
> Important: You can use the RVG sensor to acquire an image while charging ONLY with the medical charger.

To connect an RVG sensor to your computer, follow these steps:

1 Press the remote control button of the RVG control box to turn ON the device.

2 Place the RVG control box on the RFID tag.

3 Press quickly on the remote control button. The light becomes green (A) for one second indicating the Tag scanning. Once the scanning is done remove the control box and wait for the light to become solid blue (B).



> Note: if you change the access point (WiFi network), the light blinks blue before becoming solid blue.

The sensor is now connected to the WiFi access point and the selected computer.

4 Open the patient file. Access the Imaging Window. Click and click to access the FMS Acquisition interface.

Locking the RVG Sensor to the Computer (Manually)

You need to lock the RVG sensor to the computer where the acquired image must appear.

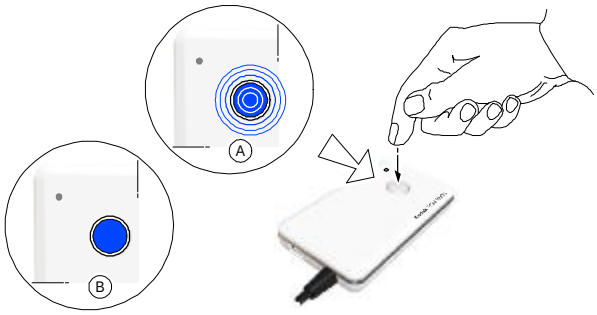
> Important: You can use the RVG sensor to acquire an image while charging ONLY with the medical charger.

Locking a Single RVG Sensor to the Computer

If you have a single RVG sensor, you need to lock it only once to the computer where the acquired image must appear.

To Lock the RVG sensor to your computer, follow these steps:

1 Press the remote control button of the RVG control box to turn ON the device. The blinking blue light indicates the sensor attempt to connect to the WiFi access point. Wait for the blinking blue light (A) to become solid blue. (B) The sensor is connected to the WiFi access point.



2 Open the patient file. Access the Imaging Window. Click and click to access the FMS Acquisition interface.

3 In the FMS Acquisition interface, click to access the RVG sensor list.

4 Find the RVG sensor in the sensor list. The sensor is identified with Available.

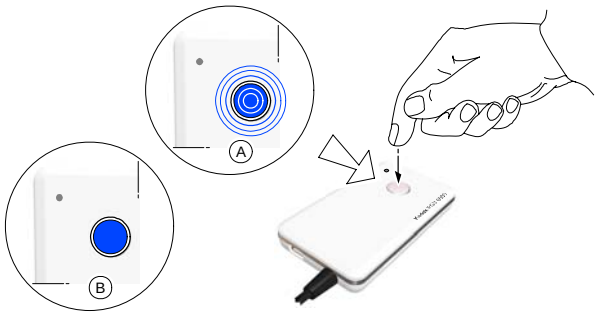
5 Click lock to connect the sensor to your computer, Available becomes Locked on PC 1.

Locking Several Shared RVG Sensors to the Computer

If you have several shared RVG sensors, you need to lock the selected RVG sensor to the computer where the acquired image must appear.

To lock the selected RVG sensor to your computer, follow these steps:

1 Press the remote control button of the RVG control box to turn ON the device. The blinking blue light indicates the sensor attempt to connect to the WiFi access point. Wait for the blinking blue light (A) to become solid blue (B). The sensor is connected to the WiFi access point.



2 Open the patient file. Access the **Imaging Window.** Click and click to access the **FMS Acquisition** interface.

3 In the **FMS Acquisition** interface, click to access the RVG sensor list. If needed, click to refresh the sensor list.

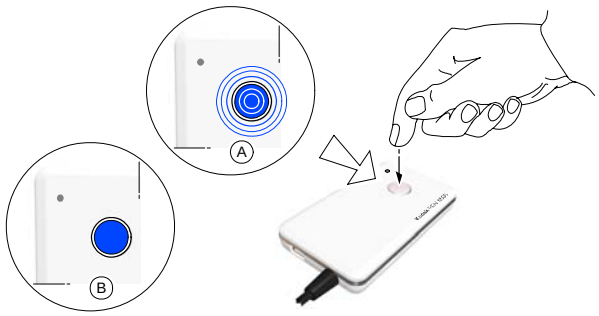
4 Find the selected RVG sensor in the sensor list:

If Available **do the following:**

Click lock to lock the sensor to your computer, Available becomes Locked on PC 1.

If Locked on PC 2 do the following:

Click unlock to unlock from the computer it is locked to and **press quickly on the remote control button while the light is blink blue (A)**. If the unlocking was not executed you must redo the unlocking process.



Click lock to lock the sensor to your computer, Available becomes Locked on PC 1.

5 Click to return to the **RVG Acquisition** interface.

Acquiring an Image with the RVG Sensor

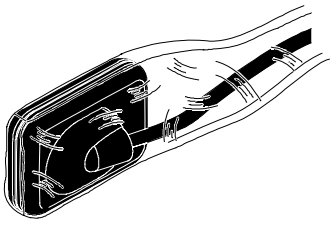
To acquire an image with the RVG sensor, follow the instructions in the presented order.

Preparing the RVG Sensor

To prepare the selected RVG sensor, follow these steps:

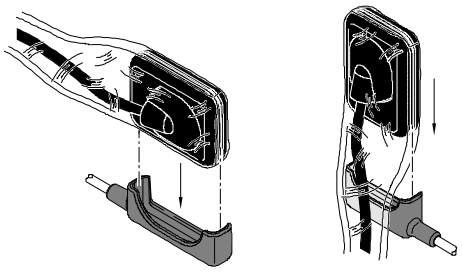
1 Select an appropriate positioner for the region of interest and the sensor size.

2 Cover with a disposable hygienic sleeves specifically designed for each sensor size.



Important: To prevent cross-contamination, use a new hygienic barrier for each new patient.

3 Place the protected RVG sensor in the sensor positioner's biteblock.



Preparing the X-Ray Generator

To prepare the x-ray generator, follow these steps:

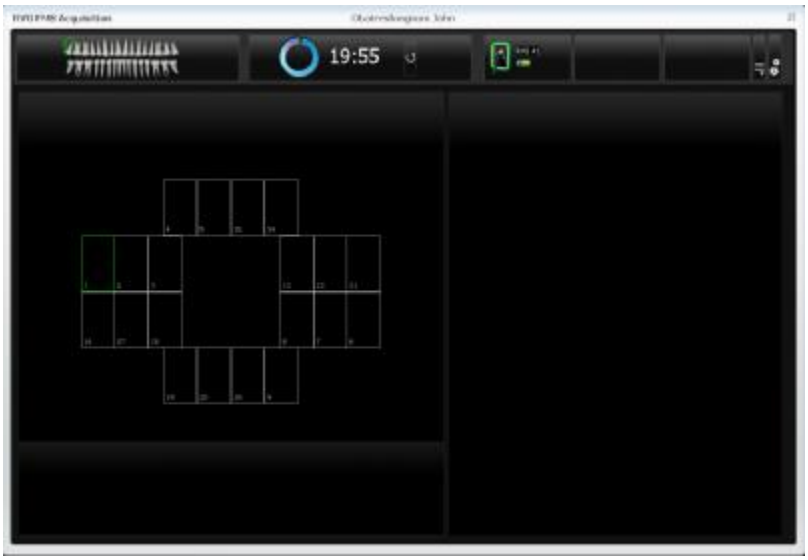
1 Select the x-ray timing according to the region of interest and the patient type (follow the user instructions of your x-ray generator).

2 Insert the sensor holding it horizontally in the patient's mouth. Positioning in the patient's mouth depends on the region of interest.

3 Approach the x-ray generator tube head to the patient.

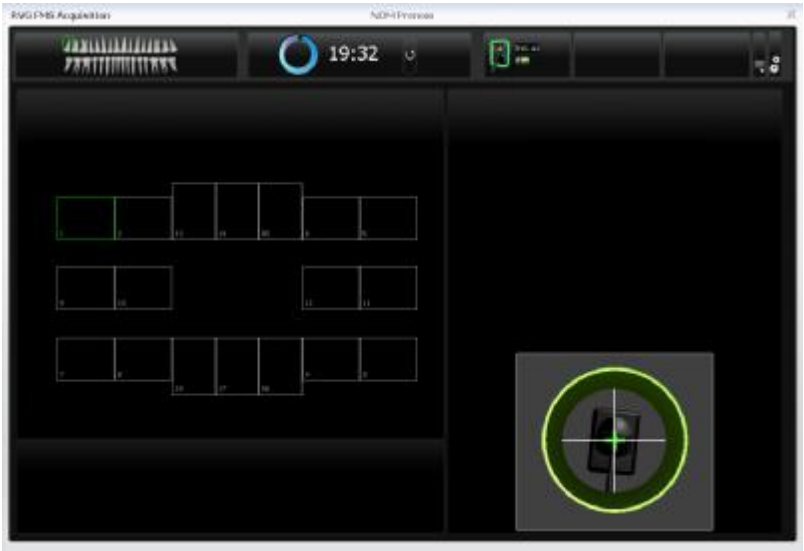
(Optional) If you are using the IPS aiming ring system, press the ON button. If you are in front of the aiming ring, make sure that the front LED is ON. If you are positioned in the back of the aiming ring, a quick press on the ON/OFF button will turn on the LED on the back.

4 In the Imaging window, click and click to access the FMS Acquisition interface. The timer is launched indicating the duration for the selected FMS template. You can click to relaunch the timer.



5 Align the x-ray tube head with the patient's tooth and the sensor and make sure that the tube head is not shacking.

(Optional) If you are using the IPS aiming ring system, position the X-ray generator parallel to the active surface of the RVG sensor. When the RVG sensor is correctly centered in the ring the centring indicator becomes a green cross.



Important: The IPS aiming ring turns off after 90 seconds.

Launching the X-Ray

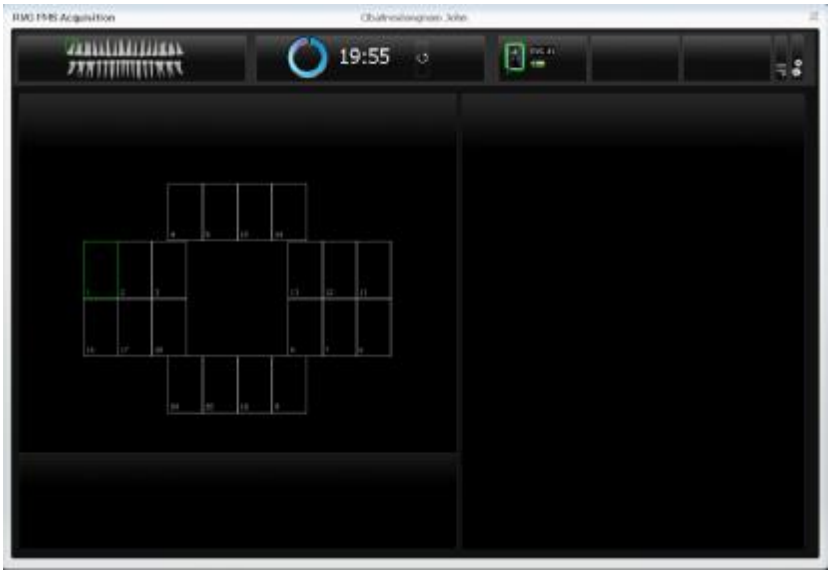
To launch the x-ray, follow these steps:

1 Ask the patient to remain still.

2 Position yourself either 2 meters behind the x-ray generator or outside the door.

3 Keep visual contact with the patient during the x-ray.

4 Select a frame in which to insert the image. The frame is highlighted in green.



5 Trigger the x-ray with the remote control of the x-ray generator.

The image appears in the preview screen of the FMS Acquisition interface. The light on the remote control button blinks blue indicating the image transmission.

The next frame is automatically highlighted in green ready for the next acquisition.

The RVG sensor is automatically reactivated after each acquisition and ready for the next acquisition.

> Note: If acquisition is interrupted and the timer ends, press on the remote control button of the RVG control box and click the refresh button of the timer to continue.

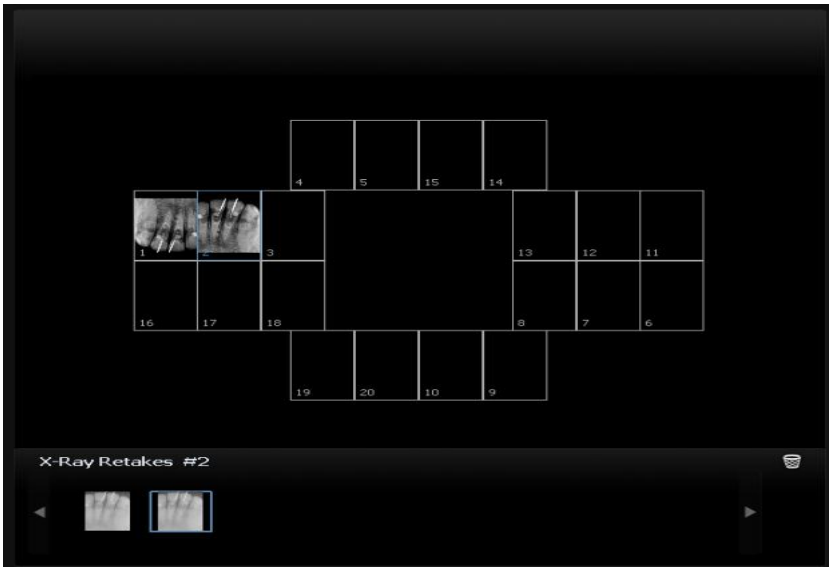
6 Continue acquiring until all the FMS template is finished.

Retaking Images

If you need to retake images either while you are going through the FMS template acquisition sequence or after the FMS template acquisition is finished.

To retake images, follow these steps:

1 Click on the frame you want to retake images. Check the image quality in the preview screen. If not satisfactory, retake another image or images.



The retake image gallery displays all the acquired images of that frame. The images are automatically saved unless you wish to select and delete them. A blue tag on the corner of the FMS frame indicates that there are retake images for this specific frame.

2 Select an image and apply image enhancement. The image enhancements will be saved automatically.

> Note: If you retake images before finishing all the FMS template, you have interrupted the automatic acquisition sequence. To relaunch the automatic acquisition, click on the next frame in the acquisition sequence.

3 Exit the FMS Acquisition interface when you have finished all the acquisition sequences.

The FMS template with the acquired images and the applied image enhancements are saved and displayed in the Imaging Window.

The retake images are also saved in the Imaging Window but not as a part of the FMS template.

The light on the remote control button becomes solid blue.

4 Remove the generator tube head.

5 Remove the RVG sensor from the patient's mouth. Remove the hygienic sensor protection.

> Important: DO NOT pull the sensor by its cable when you remove the hygienic protection.

8 RVG Mobile Application

The RVG Mobile Application Overview

> Important: iPhone®/iPod® touch devices are not included or delivered with the KODAK RVG 6500 Systems.

The RVG mobile interface is a user-friendly working interface that is designed and developed specifically for the KODAK RVG 6500 intraoral imaging system. The RVG mobile interface module, to be used on your Apple iPhone®/iPod® touch, is downloadable from the Apple Store. It enables you to acquire X-ray images without the presence of a computer in the patient's vicinity. For how to use your iPhone®/iPod® touch see the product's user manual.

The RVG mobile interface enables you to:

- Acquire X-ray images using your iPhone®/iPod® touch.
- View the acquired X-ray images on your iPhone®/iPod® touch.
- Transfer acquired X-ray images from your computer to your iPhone®/iPod® touch.
- Transfer acquired X-ray images from your iPhone®/iPod® touch to your computer.

> Important: Your iPhone®/iPod® touch devices cannot be used as a diagnostic tool. You can only use your computer to view the X-ray image to make your diagnosis.

Mobile Application Windows Overview

Figure 13 Patient Window

1 Search field: Searches a specific patient

2 Patient list: Lists patients in alphabetical order.

3 Patient list button: Accesses the Patient window.

4 Sensor list button: Accesses the Sensor list window

5 Transfer button: Uploads the images to the KDIS

6 Help button: Accesses the help documentation

7 Edit button: Accesses the Edit Patient window to modify or create the patient file

Touch the different fields to access the different options.

Figure 14 Editing Patient Window

1 **Cancel button:** Cancels all the new modifications

2 **Patient file field:** Displays patient information

3 **External ID field:** Displays patient ID number generated by the third party patient management software

4 **Key board:** Edits the patient information

5 **Upper/Lower case button:** Edits lower or upper case letters

6 **Number button:** Changes the keyboard from alphabetic to numeric keyboard

7 **Return button:** Leads you to the next field

8 **Delete button:** Deletes the entered letter or number

9 **Exit button:** Closes the accessed option, for example the calender.

10 **Done button:** Saves the edited information and accesses the **Edited Patient** file window

Figure 15 Calender Window

Figure 16 Edited Patient File Window

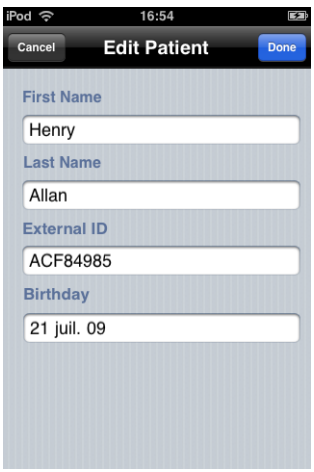


Figure 17 X-Ray Acquired Image Window

1 **Gallery button:** Accesses the slides of the acquired images.

2 **Preview screen:** Displays real-time the acquired image.

3 **Back button:** Returns to the previous image.

4 **Image contrast button:** Enhances the different zone of interest:

- **0:** Perio: Optimizes the display of periodontal tissues.
- **+:** Endo: Optimizes the contrast values over the entire range.
- **++:** Dentin-Enamel Junction (DEJ): Optimizes the values at the crown, the amelo-dentinal junction and the roots.
- **Raw:** Initial acquired image with no enhancement.

5 **Toggle between** **Contrast/Brightness button:** Manages the black and white contrast.

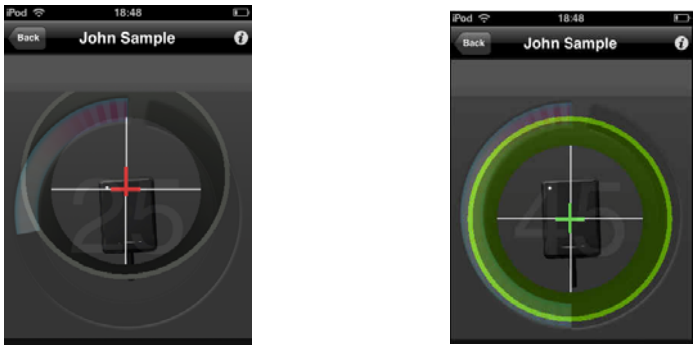
6 **Zoom button:** Enlarges and highlights a section of the image

7 **Reset button:** Resets to initial image

8 **Forward button:** Goes to the next image

9 **Information button:** Accesses the image information

Figure 18 IPS Aiming Ring Interface and Alignment Indicator



(optional) The IPS aiming ring enables you prior to acquisition to dynamically and visually center and align the X-ray beam to the RVG sensor.

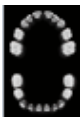
Mobile Application Icons Overview

Information button:

Tap to access information on the displayed image.

Adult/Child:

Tap on the icon to toggle between Adult/Child option of dental arch.



Tooth Numbering:

Tap to access the dental arch.

- Double-tap to in the arch to zoom out.
- Double-tap to in the arch to zoom in.
- Slide 2 fingers over the dental arch to move up, down. or side to side.
- Tap on the tooth you want to select.

Image Gallery:

Tap to access the image gallery of the selected patient.

Open Padlock:

Tap the open padlock for an automatic deletion of the image when transferred from the iPod/iPhone to the computer.

Closed Padlock:

Tap the closed padlock to save a copy of the image when transferred from the iPod/iPhone to the computer.

Delete:

Tap to delete the selected image from the iPod/iPhone.

Red tag in patient list:

Indicates the total number of images per patient not yet transferred to the computer

Blue tag in patient gallery:

Indicates that the image has not yet been transferred to the computer.

Closed Padlock on the image

Indicates that the image has been locked and will remain in the iPod/iPhone after image transfer to your computer.

When there is no padlock on the image the image will be deleted when transferred to your computer.

X-Ray Dose Indicator

Indicates the X-ray exposure dose of the acquired image.

Dose indicator red and towards the left of the band: Under-exposure of the image. Increase the X-ray dose.

Dose indicator red and towards the right of the band: Over-exposure of the image. Decrease the X-ray dose.

Dose indicator green: Correct exposure of the image.

Downloading the RVG Mobile Application

If iPhone/iPod Touch is Connected to the Internet

If your iPhone®/iPod® touch device is connected to the Internet, follow these steps:

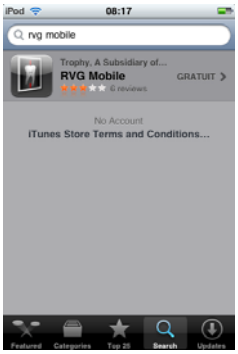
1 On the main window, tap

. A window is displayed with different applications.

2 Tap

. In the search field, enter **RVG mobile** and tap

. The RVG Mobile Icon is displayed.



3 Tap
. The RVG mobile detail window is displayed.

iPod
08:18
Search
Info
RVG Mobile
Trophy, A Subsidiary of...
FREE
The RVG Mobile application is a unique image review & acquisition software for dental professionals using the KODAK RVG Systems.
This application is an introductory version before promoting a final version which will be soon available.
Overview:
The RVG Mobile application is designed for dental professionals using the KODAK RVG Sensor and willing to display, review &acquire RVG x-ray images on an iPod touch / iPhone device.
The RVG Mobile application is a convenient extension of the desktop KODAK Dental Imaging Software for users that need to access, review and

4 Tap

. The

is displayed.

5 Tap

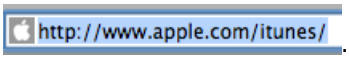
to start the download and follow the on-screen instructions.

If iPhone/iPod Touch is not Connected to the Internet

If your iPhone®/iPod® touch device is not connected to the Internet the **Application Store** window is displayed when you want to access the Apple Store to download.

In this case, follow these steps:

1 Connect your iPhone®/iPod® touch device to the computer.

2 Go to the Apple Store web site 

.

3 Click

. Follow the on-screen instructions. When the **iTunes** is installed on your computer,

appears on your desktop.

4 Double-click

. Enter the required on-screen information. The **iTunes** main window is displayed.

5 Select **Store > iTunes Store**. The **App Store** window is displayed.

6 On right top corner of the **App Store** window, in the search field enter **RVG mobile** and launch the search to find the **RVG Mobile Application**.

7 Click

. The RVG Mobile application download is launched. The download icon

appears on the lateral bar. Wait until the download ends.

8 In the lateral bar, select **Devices > iPod or iPhone** to upload the RVG mobile application on your device. Click on the tab **Application**.

9 Check **Sysnc Applications** and the check box of the **RVG Mobile Application.** Click Apply to send the **RVG Mobile Application** to your device.

10 Click when the upload process ends.

You must now connect your device to the WiFi access point.

Connecting The Device to the WiFi Access Point

To connect your device to the WiFi access point, follow these steps:

1 On your device, tap the **Settings** window is displayed.

2 Tap . Tap **OFF** to change to **ON**. The **WiFi Networks** window is displayed.

3 Tap RVG8_Network. The Enter Password window is displayed.

4 Enter the Password: 7794AA6500EC239BFF4554DD80. Tap Join

5 When the WiFi connection is established, iPod signal is displayed on the WiFi Networks window and a check appears next to RVG8_Network.

6 Tap Settings to return to the Settings window.

You must now configure the preference settings of the RVG Mobile Application.

Configuring the Preference Settings

To configure the preference settings, follow these steps:

1 In the Settings window, scroll down until the end and tap RVG Mobile. The RVG Mobile window is displayed.

2 To “name” your RVG sensor, tap in the Device Identification field and enter the new name.

Important: If you have several iPod/iPhone, you must name each device to identify them easily when searching in the RVG list.

3 To select the “X-Ray” mode settings, in the RVG 6500 Sensor Mode field slide I button. This mode enables you to connect to the RVG sensor to acquire live X-ray images..

Important: In the “X-Ray” mode, the “Demo” mode is automatically inactive.

To select the “Demo” mode settings, in the RVG 6500 Sensor Mode field slide O button. This mode enables you to demonstrate an acquisition simulation with the RVG sensor.

In this case you must indicate the type of demo mode:

Sensor connected:

- With an RVG 6500 sensor connected to your iPod/iPhone.
- Image is displayed on the iPod/iPhone.

Sensor simulated:

- Without an RVG 6500 sensor connected to your iPod/iPhone.
- Image is displayed on the iPod/iPhone

Sensor IPS simulated:

- Without an RVG 6500 sensor connected to your iPod/iPhone.
- With a simulated IPS display during 10 seconds.
- Image is displayed on the iPod/iPhone.

Tap

to return to the **RVG Mobile** window.

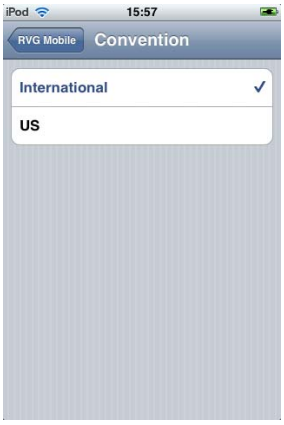
4 to select **"Image Processing"** settings, in the **RVG Mobile** window, tap **Image Processing** field. The **Processing** window is displayed.

In the **Processing** window, **Endo** (optimizes the contrast values over the entire range) is selected by default. We recommend that you keep this selection. You can select any type of image contrast while reviewing the acquired image using the image contrast functions of your device (see Figure **"X-Ray Acquired Image Window"**).

Tap

to return to the **RVG Mobile** window.

5 To select **"Tooth numbering",** in the **RVG Mobile** window, tap **Tooth numbering** field. The **Convention** window is displayed.



Tap the relevant convention. A check sign appears in the field that you have selected.

Tap

to return to the **RVG Mobile** window.

6 The **RVG Mobile** window is displayed with the new selections. These selection are automatically saved.

7 If the settings are correct, tap the **Home button** to return to the main window. The configuration of the settings is saved and finished.

Locking the RVG Sensor to the Apple Device

To lock the RVG sensor on your Apple device, you need to have the RVG mobile application on your iPhone®/iPod® touch device.

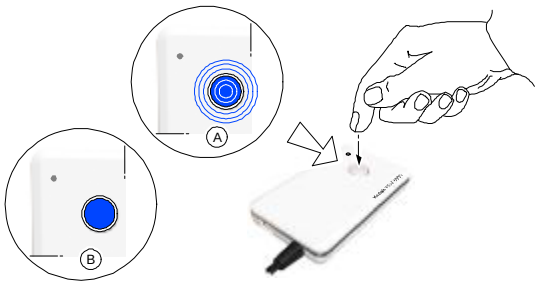
To ensure best use, follow the instructions in the following order.

> Important: Make sure that you have connected your device to the WiFi access point before starting.

Accessing the Sensor List Window

You must access the Sensor list window before locking the RVG sensor to your Apple device. To access the sensor list window, follow these steps

1 With the sensor in hand, press the remote control button of the selected RVG control box to turn ON the device. Wait for the blinking blue light (A) to become solid blue (B).



2 Turn ON your Apple device. Tap to access the Patient window.

3 In the Patient window, tap

to access the Sensor list window. The Sensor list window is displayed. Find the desired sensor in the sensor list.

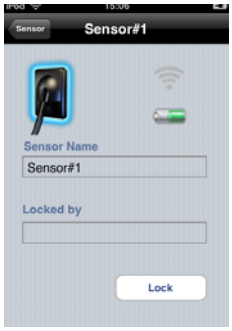
Locking a Single RVG Sensor to the Apple Device

If you have a single RVG sensor, you need to lock only once to the device where the acquired image must appear.

To lock the RVG sensor to your device, follow these steps:

1 In the Sensor list window, tap on the sensor.

2 Tap **Lock** . Tap **Lock** to validate.

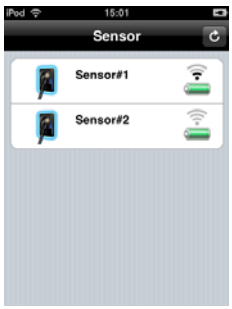


Locking Several Shared RVG Sensors to the Apple Device

If you have several shared RVG sensors, you need to lock the selected RVG sensor to the device where the acquired image must appear.

To lock the selected RVG sensor to your device, follow these steps:

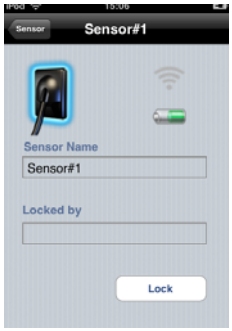
1 In the **Sensor** list window identify the selected sensor.



If : Sensor is locked on your device and ready for acquisition. You can continue to section “Finding or Creating a Patient File”.

If : Sensor is available you must lock it on your device.

2 In the **Sensor** list window, tap the selected sensor. Then, tap **Lock** . Tap **Lock**.

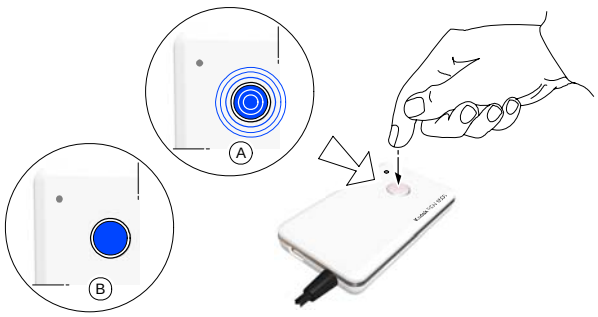


to validate.

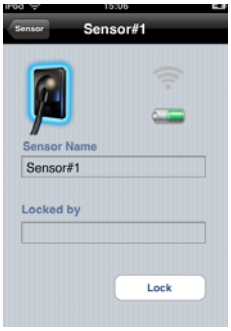
If : Sensor is not available (locked on another device). You must unlock and then lock the sensor on your device.

In the **Sensor** list window, tap the selected sensor. Then, tap **Unlock**. Tap **Unlock** to validate.

Press quickly on the remote control button while the light is blink blue (A). If the unlocking was not executed you must redo the unlocking process.



Then, tap **Lock** . Tap **Lock** to validate.



Finding or Creating a Patient File

To find or create a patient file, follow these steps:

1 Tap

to access the **Patient** window.

2 In the **Patient** window, in the search field enter the patient's name and tap to open the patient's file or search by alphabetical order.

If you need to create or edit a patient's information, tap to access the **Edit Patient** window. Tap the different fields to access the different options. Edit or modify the patient's information. Tap **Done** to save the patient information.

3 Tap on the selected name, the displayed window presents the patient information and the sensor status.

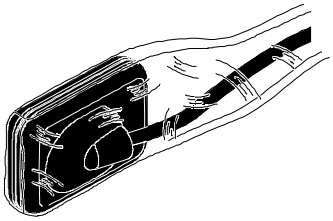
Acquiring an Image with the RVG Mobile Application

Preparing the RVG Sensor

To prepare the selected RVG sensor, follow these steps:

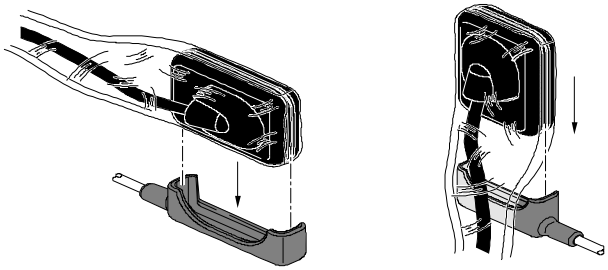
1 Select an appropriate positioner for the region of interest and the sensor size.

2 Cover with a disposable hygienic sleeves specifically designed for each sensor size.



Important: To prevent cross-contamination, use a new hygienic barrier for each new patient.

3 Place the protected RVG sensor in the sensor positioner's biteblock.



Preparing the X-Ray Generator

To prepare the x-ray generator, follow these steps:

1 Select the x-ray timing according to the region of interest and the patient type (follow the user instructions of your x-ray generator).

2 Insert the sensor holding it horizontally in the patient's mouth. Positioning in the patient's mouth depends on the region of interest.

3 Approach the x-ray generator tube head to the patient's chair.

(Optional) If you are using the IPS aiming ring system, press the ON button. If you are in front of the aiming ring, make sure that the front LED is ON. If you are positioned in the back of the aiming ring, a quick press on the ON/OFF button will turn on the LED on the back.

4 Bring the tube head in front of the aiming ring if using the RINN positioner.

(Optional) If you are using the IPS aiming ring system, position the X-ray generator parallel to the active surface of the RVG sensor. When the RVG sensor is correctly centered in the ring the centring indicator becomes a green cross.

> Important: The IPS aiming ring turns off after 90 seconds.

5 Correctly align the tube head with the sensor.

6 Make sure that the tube head is not shacking.

Launching the X-Ray

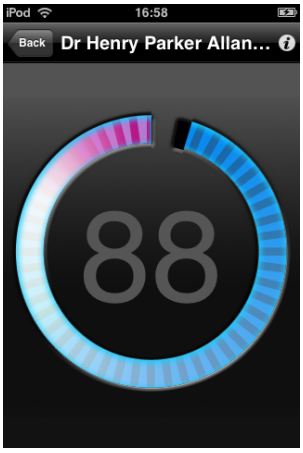
To launch the x-ray, follow these steps:

1 Ask the patient to remain still.

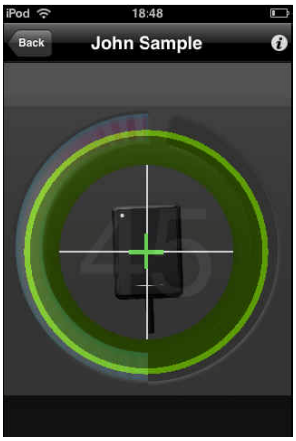
2 Position yourself either 2 meters behind the x-ray generator or outside the door.

3 Keep visual contact with the patient during the x-ray.

4 Touch Acquire to acquire an image.The 90 seconds timer is displayed. The RVG control box is solid green.



(Optional) If you are using the IPS aiming ring system



5 Trigger the x-ray with the remote control of the x-ray generator. The image appears in the preview screen of your device. The light on the remote control button blinks blue indicating the image transmission

6 When the acquisition ends, the light on the remote control button becomes solid green. At this stage, while the count down continues, you can continue acquiring other images.

If the count down ends and you wish to acquire other images then redo step 5.

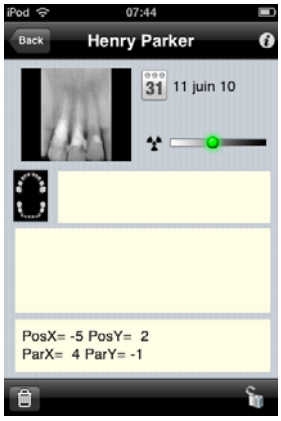
7 Check the image quality. If not satisfactory, redo the x-ray. If satisfactory, remove the generator tube head.

8 Remove the RVG sensor from the patient's mouth. Remove the hygienic sensor protection.

Important: DO NOT pull the sensor by its cable when you remove the hygienic protection.

9 Tap on the acquired image to access the contrast tools. The acquired images is saved automatically.

10 Touch to access the summary of the last acquired image. You can enter any comments in the yellow comment's field.

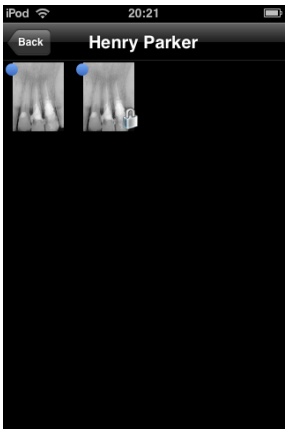


11 Tap to access the dental arch window. Tap and touch the selected tooth or teeth number.

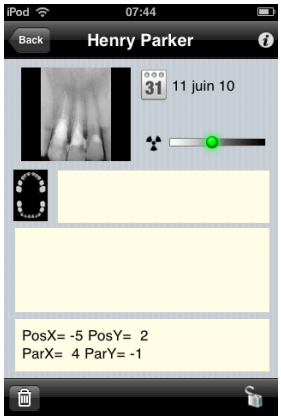
12 Tap to return to the previous window.

13 Tap

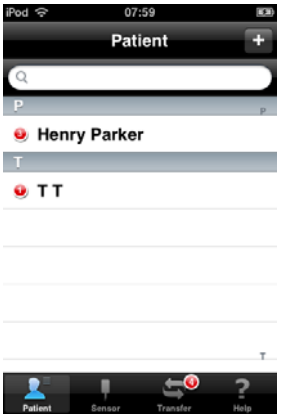
to view all the acquired images of the patient. You can touch each acquired image in the gallery and do step 10 and 11.



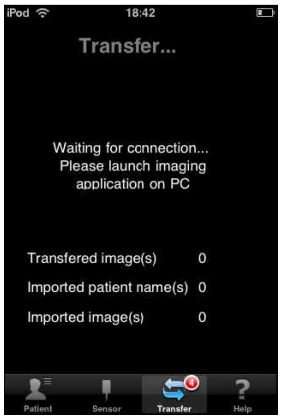
14 Tap Back to display the patient information.



15 Tap Back to access the **Patient** window.



16 When you want to transfer all the acquired images of the patients to your computer, in the **Patient** window, touch Transfer the transfer window is displayed.



17 Launch the KDIS, click , and follow the on-screen instructions.

9 Troubleshooting

Occasionally, malfunctions can occur during use in the event of an incorrect action. The quick trouble shooting and the Information “I”, will guide you through the actions you need to take to correct the malfunction.

Important: If the malfunction persists or more serious conditions occur, contact your representative.

When you call your representative have the following information ready:

- Model Number: KODAK RVG 6500
- Error Code Number: I xx
- Message displayed on the popup on the computer screen.

Quick Trouble Shooting

The quick trouble shooting guides you through actions you need to take to correct the malfunction.

The following table lists the malfunctions and the action to take.

Table 1 Quick Trouble Shooting

Malfunction	Possible Cause	Action
When you turn ON your RVG sensor, the battery LED is red but the control box is solid blue.	The battery needs recharging.	Recharge the battery. You can continue acquiring images but the quality will deteriorate.
When you turn ON your RVG sensor, it blinks blue then it turns OFF.	The battery needs recharging.	Recharge the battery.
When you turn ON your RVG sensor, the battery LED is red and the control box is blinking red.	No battery	Recharge the battery
Image quality is not good and there are white lines on the image	The battery needs recharging.	Recharge the battery
When you turn ON your RVG sensor, it blinks blue then after a long time it becomes solid red.	• WiFi access point is not ON. • Configuration problem.	• Check that the WiFi access point is ON. • If it is ON and the problem persists contact your representative

Table 1 Quick Trouble Shooting (Continued)

Malfunction	Possible Cause	Action
When you turn ON your RVG sensor, it blinks blue then becomes solid blue but the sensor cannot be found in the sensor list on the computer.	• WiFi access point is not ON. • Configuration problem.	• Check that the WiFi access point is ON. • If it is ON and the problem persists contact your representative
When you turn ON your RVG sensor, it blinks blue then becomes solid blue but when you press the control box button to acquire an image it does not turn green.	The KDIS is not open	Launch the KDIS
When you turn ON your RVG sensor, it blinks blue then becomes solid blue but when you press the control box button to acquire an image it does not turn green.	The RVG sensor is not locked on any device.	Lock the RVG sensor on the computer or the iPhone®/iPod® touch device.
The IPS interface is frozen.	The IPS aiming ring connection problem.	• Check that the IPS aiming ring is ON (the shut down time is 90 sec.). • The IPS aiming ring is too far from the RVG sensor. • The IPS ailing ring is to close to the RVG sensor.
When you turn ON your RVG sensor, it blinks blue for a long time never becoming solid blue or solid red.		Contact your representative.
When you turn ON your RVG sensor, it blinks blue then rapidly it becomes solid red.		Contact your representative.
When you position your RFID RVG control box on the RFID tag there is no change in the LED color.	• No RFID tag is detected. • The RFID RVG control box is not correctly positioned on the RFID tag.	Position correctly the RFID RVG control box on the RFID tag for the scanning of the data.
When you position your RFID RVG control box on the RFID tag, the LED turns red for a second.	• The RFID tag is detected but it is not the correct tag for the RFID RVG. • The RFID RVG control box is not correctly positioned on the RFID tag. • You have removed the RFID RVG control box before it scanned the tag for the data.	• Make sure the tag is the correct tag for the RFID RVG. • Position correctly the RFID RVG control box on the RFID tag. • Position correctly the RFID RVG control box on the RFID tag and wait for the scanning to end.

Information Messages

An information **"I"** error code with a message is displayed on the popup on your computer screen.

The following table lists the information messages and the action to take.

Table 2 Information Messages

Information Error Code	Information Message	Action
I 1	Communication problem with the wireless RVG sensor.	• Turn Off then ON the RVG sensor. • Or reboot your computer. • If the problem persists, contact your representative.
I 2	Sensor error.	1. Turn Off then ON the RVG sensor. 2. Click to access the **RVG Acquisition** interface. If the problem persists, contact your representative.
I 3	Error during image acquisition.	1. Turn Off then ON the RVG sensor. 2. Click to access the **RVG Acquisition** interface. If the problem persists, contact your representative.
I 4	Memory allocation problem.	Turn Off then ON the RVG sensor. If the problem persists, contact your representative.
I 5	Sensor has storage/transmission memory problem.	Contact your representative.
I 6	Incorrect IPS calibration.	Contact your representative.
I 7	IPS Batteries have run down.	Change the batteries of the IPS aiming ring.
I 8	Writing transmission error.	1. Turn Off then ON the RVG sensor. 2. Redo the process If the problem persists, contact your representative.
I 9	Reading transmission error.	1. Turn Off then ON the RVG sensor. 2. Redo the process If the problem persists, contact your representative.
I 10	Memory allocation problem.	• Reboot your computer. • If the problem persists, contact your representative.

Table 2 Information Messages (Continued)

Information Error Code	Information Message	Action
I 11	Error during the image transfer.	1. Turn Off then ON the RVG sensor. 2. Click to access the **RVG Acquisition** interface. If the problem persists, contact your representative.
I 12	System error.	1. Exit the **KDIS**. 2. Click to access the **RVG Acquisition** interface. If the problem persists, contact your representative.
I 13	Image storage problem in the patient database.	1. Check that you can access the patient database. 2. Check the hard disk storage availability. 3. Check if there is enough space in the patient database. If the problem persists, contact your representative.
I 14	Error during the image acquisition.	1. Turn Off then ON the RVG sensor. 2. Click to access the **RVG Acquisition** interface. If the problem persists, contact your representative.
I 15	Writing transmission error.	Make sure you have positioned correctly the RFID tag. If the problem persists, contact your representative.
I 16	Reading transmission error.	Make sure you have positioned correctly the RFID tag. If the problem persists, contact your representative.

10 Maintenance

This chapter describes the maintenance task that you need to perform regularly for your KODAK RVG 6500 system and the accessories.

Daily

The RVG Sensor

The RVG sensor is supplied in a non-sterile state. Single-use disposable protective hygienic sleeves must cover the RVG sensor before placing it in the patient's mouth. These sleeves are conform to the ISO EN 10993.

To prevent cross-contamination, use a new hygienic barrier for each new patient and disinfect the RVG sensor.

WARNING: Never place the sensor and/or control box in an autoclave as this could result in serious damage to the sensor.

Cleaning and Disinfecting the RVG Sensor

WARNING: You must first clean the RVG sensor before disinfecting it.

You must first clean the RVG sensor before disinfecting it. To do so, follow these steps:

1 Remove the protective hygienic sleeves.

2 Remove debris or organic matter from the sensor surfaces with a disposable wipe or surface brush.

3 Inspect the sensor for debris. Repeat cleaning if there is any debris left.

4 Clean and disinfect with disinfecting wipes.

If you choose disinfecting solutions, use disinfectant suitable for medical devices and composed of Ethanol and/or Isopropanol, and/or Quaternary ammonium (follow the chemical manufacturer's instruction).

Cleaning the RVG Sensor Control Box

The RVG sensor control box must be cleaned with disposable cleaning wipes similar to those used for the computer screens.

WARNING: Never immerse the RVG sensor control box in any solution.

Cleaning the Positioning Accessories

WARNING: Do not use chemical autoclave for the toothbrush holders and avoid direct contact with the metallic part of the autoclave.

Table 3 Positioning Accessories Daily Maintenance Tasks

Accessories	Maintenance Tasks
Toothbrush holders Bite blocks	1. Remove any residue with hot water and soap. 2. Put the metal and plastic parts in separate sterilization pouch and autoclave up to 132°C (273° F) before the next patient.
RINN Arm & ring	1. Disassemble the metal arm and the plastic ring. 2. Remove any residue with hot water and soap. 3. Put the metal and plastic parts in separate sterilization pouch and autoclave up to 132°C (273° F) before the next patient.
IPS aiming ring	Wipe clean with disposable cleaning wipes.

Monthly

Wipe the outer covers of the WiFi AP with a soft and dry cloth.

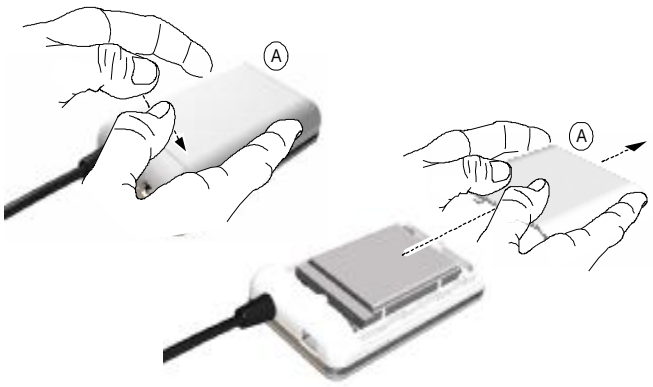
Replacing the RVG Battery

To replace the RVG battery, follow these steps:

1 Turn OFF the RVG sensor.

2 Make sure that the RVG sensor is not connected to the mains outlet.

3 Press down with fingers and slide the trap door (A) protecting the battery on the back of the control box.



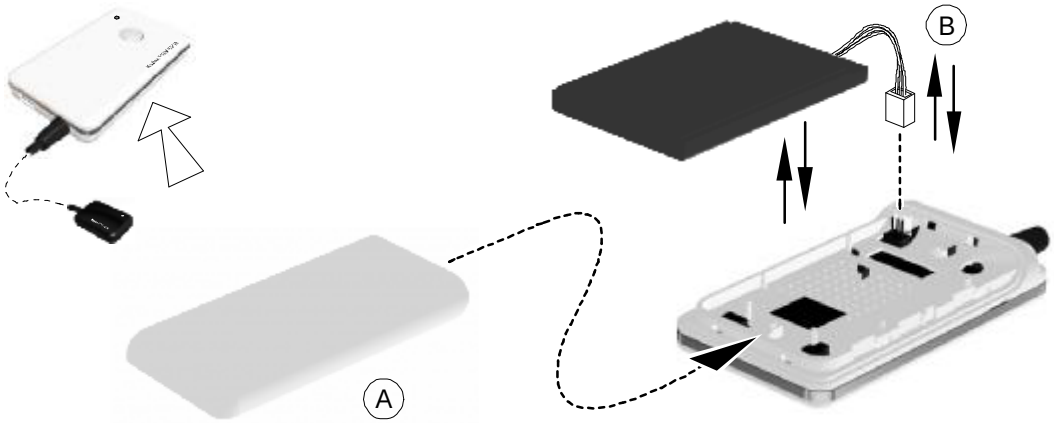
4 Remove carefully the connector (B) to remove the used battery.

5 Insert the connector (B) of the appropriate battery.

> WARNING: Make sure that the battery is inserted correctly in its connector.

6 Slide and close the trap door (A) protecting the battery.

RVG Control Box



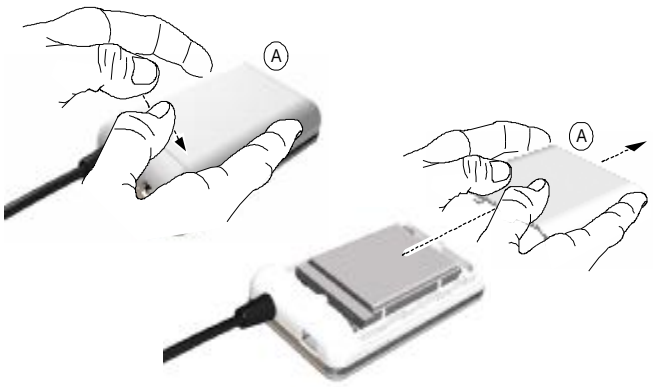
Replacing the RVG Battery

To replace the RVG battery, follow these steps:

1 Turn OFF the RVG sensor.

2 Make sure that the RVG sensor is not connected to the mains outlet.

3 Press down with fingers and slide the trap door (A) protecting the battery on the back of the control box.



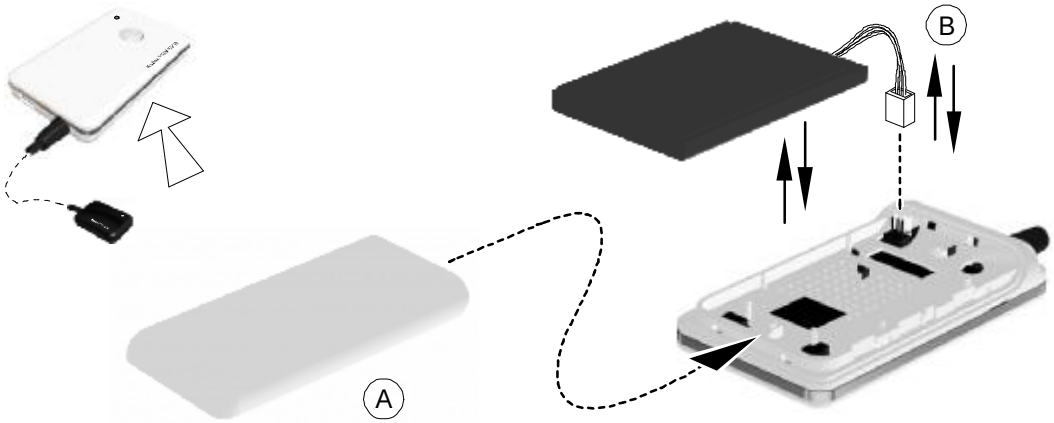
4 Remove carefully the connector (B) to remove the used battery.

5 Insert the connector (B) of the appropriate battery.

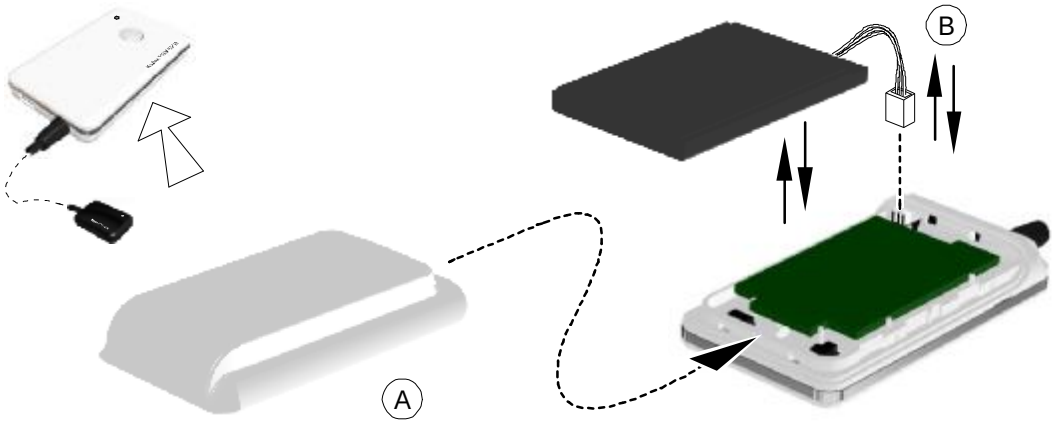
> WARNING: Make sure that the battery is inserted correctly in its connector.

6 Slide and close the trap door (A) protecting the battery.

RVG Control Box



RVG Control Box with IPS board

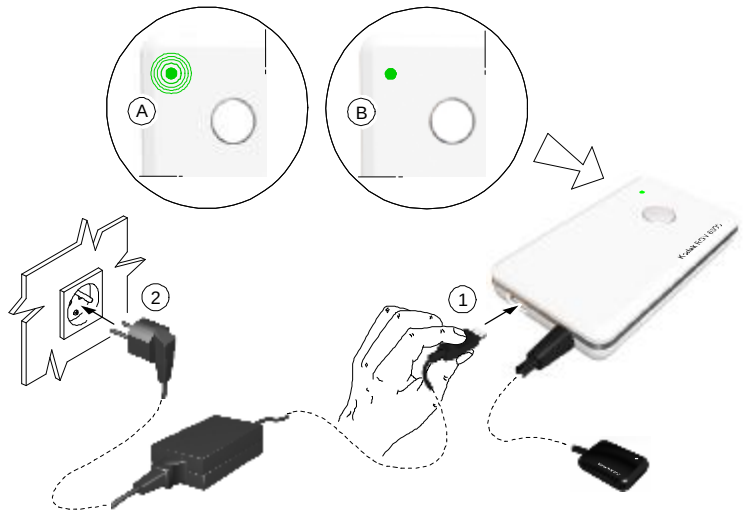


Important: For the RVG with IPS board, make sure that you insert the battery gently avoiding any damage to the IPS board.

7 Plug one end of the medical charger in the USB port of the RVG control box.

8 Plug the other end to the mains outlet.

The blinking green light of the battery status (A) on the control box indicates the charging process. The first charging takes about 4hours. When the green light becomes solid green (B) the charging is complete.



With a fully charged battery you can acquire 180 images.

Important: You can use the RVG sensor to acquire an image while charging ONLY with the medical charger.

9 You can use the USB cable to charge RVG battery with the computer.

WARNING: NEVER use the RVG sensor to acquire an image while charging with the USB cable.

Important: Remove the battery from the control box if you will not use it for a long period of time.

Replacing the IPS Aiming Ring Battery

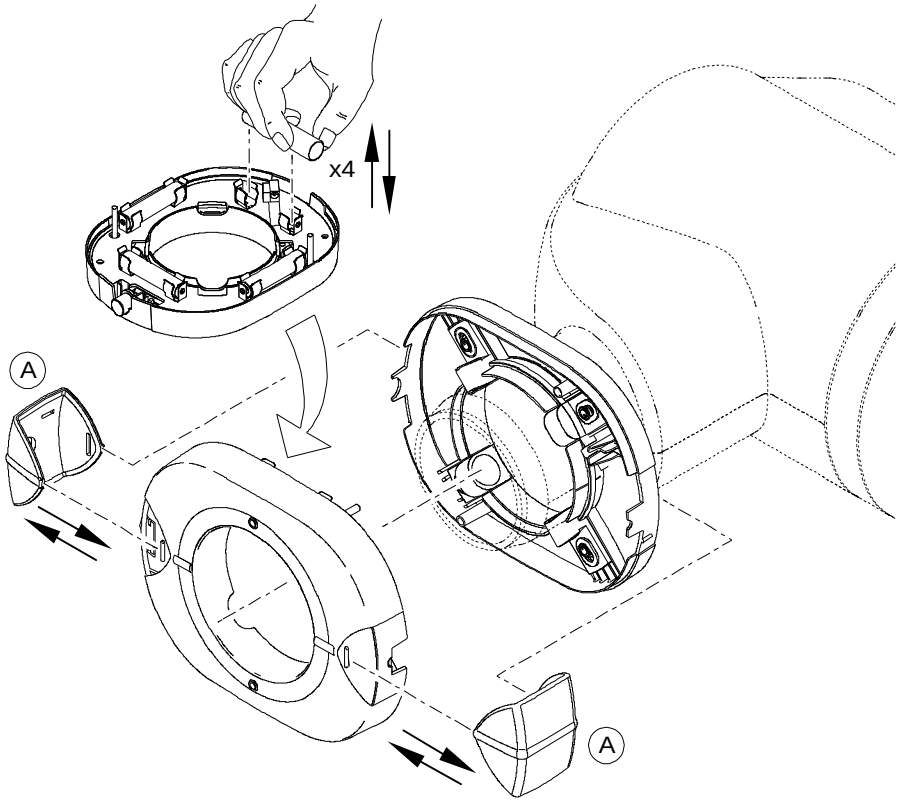
Important: When the battery is low the LEDs light becomes orange. You need to replace the IPS battery.

To replace the IPS aiming ring battery, follow these steps:

1 Remove the attachment brackets (A).

2 Remover the front cover.

3 Remove the used 4 batteries.



4 Replace correctly the new 4 batteries respecting the polarities.

5 Replace the front cover.

6 Replace the attachment brackets (A).

7 Turn ON the IPS aiming ring to check that the batteries are replaced correctly.

Important: Remove the battery from the IPS aiming ring if you will not use it for a long period of time.

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